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# SQUIRE'S COMPANION

TO THE

# BRITISH PHARMACOPŒIA

---

THIRTEENTH EDITION

1882

# COMPANION

TO THE LATEST EDITION OF THE

# BRITISH PHARMACOPŒIA.

THIRTEENTH EDITION.

# COMPANION

TO THE LATEST EDITION OF THE

# BRITISH PHARMACOPŒIA,

COMPARING THE STRENGTH OF ITS VARIOUS PREPARATIONS
WITH THOSE OF THE
UNITED STATES, AND OTHER FOREIGN PHARMACOPŒIAS.
TO WHICH ARE ADDED
NON-OFFICIAL PREPARATIONS, AND
PRACTICAL HINTS ON PRESCRIBING.

BY

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HONORARY MEMBER OF THE PHARMACEUTICAL SOCIETY OF AUSTRIA.

ASSISTED BY HIS SONS,

**PETER WYATT SQUIRE AND ALFRED HERBERT SQUIRE.**

JOINTLY CHEMISTS IN ORDINARY ON THE ESTABLISHMENT OF THE QUEEN.

Thirteenth Edition.

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In Memory of

SIR JAMES CLARK, BART., K.C.B., M.D., F.R.S.,

*To whom, by his permission, the former Editions were dedicated, and whose death, at the mature age of* 82, *was lamented by her Majesty and the whole of the Royal Family; and by the Medical Profession, of which he was one of the brightest ornaments.*

*He was not only a wise physician, but a man of sound judgment and quick perception. His hand was ever ready to help the unfortunate and to assist the deserving; and some who have risen to the highest professional eminence owe their success in a great measure to his counsel and advice during their early career.*

*He was much interested in Pharmacy, and through his influence the Pharmaceutical Society sent its delegate to take part in the formation of the British Pharmacopœia.*

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# PREFACE

## TO THE FIFTH EDITION.

THE Pharmacopœia of 1864 had the merit of amalgamating the three Pharmacopœias of Britain, but it had defects, and the Medical Council ordered a new edition to be prepared. A Committee was appointed of eminent men, with the President of the Council as Chairman. These gentlemen were engaged some years upon the work; and when completed it was submitted to all the members of the Medical Council, and to other practical men, for the purpose of receiving suggestions. The Author prepared, from the formulas of this work, the preparations for the Paris Exhibition; it has therefore been well tested and corrected, and is worthy of the respect of the medical profession.

The Author has re-written his "Companion" to correspond with this new Edition, and so arranged the matter as to render it easy for medical men in active practice to become acquainted with the changes and new introductions with as little expense of trouble and time as possible.

The "Non-Official" preparations are increased in number. Incompatibles, and antidotes to poisonous drugs, are added; and the Author has taken great pains to make this new work as worthy the notice of the Profession as the previous Editions have been.

277, Oxford Street,
*July*, 1867.

The Fifth Edition having been disposed of within a fortnight from its publication, it has been found necessary to reprint another thousand, and in doing this the Author has carefully revised each proof-sheet, with a desire to make the book as perfect as possible.

*August*, 1867.

This second issue was sold in three months.

*November*, 1867.

The third was out of print three and a half months after its publication.

*April*, 1868.

# PREFACE

## TO THE SIXTH EDITION.

In this Edition are described the colours and characters of the liquid and solid preparations, except of those which are made as required,—Decoctions, Enemas, Infusions, &c.

It is most difficult to describe colours, especially those of liquids, but it is hoped that such an approximation is attained as may enable Physicians to judge whether Medicines have their proper appearance.

The descriptions are taken from the Collection that was placed in the French Exhibition, and in the case of those preparations that have undergone change during the ten months they were exposed there, the alteration is described; so that the Committee may consider the propriety of modifying them in a future Edition of the British Pharmacopœia.

The Collection is in the Museum of the College of Physicians.*

---

* The Author has since presented it to Trinity College, Dublin.

# PREFACE

## TO THE EIGHTH EDITION.

THE Seventh Edition (3,000 copies) has been sold in eighteen months; the interest, therefore, taken in this work is unabated.

In writing this, the Eighth Edition, the Author has been assisted by his two sons, who he hopes will continue the Editorship with the same spirit, should his strength fail. The present Work contains the new medicines that have been introduced since the publication of the Seventh Edition, and much additional practical information for the prescriber and dispenser is added, omitting many remarks that are no longer necessary.

# PREFACE

## TO THE NINTH EDITION.

THE Eighth Edition (3,500 copies), now out of print, completes the 20,000 copies which have been disposed of, and are in the hands of the prescribers and dispensers of medicine, averaging 2,000 copies per annum.

The Author has therefore the pleasing duty of acknowledging with grateful thanks this recognition of his efforts. His endeavour will be to keep pace with the march of Medical Science and Pharmacy, carefully selecting new medicines which have been proved to be valuable.

The recently published Pharmacopœia Germanica and the new U.S. Pharmacopœia have been compared with the British in this work, and some of the preparations adopted.

An Index to Diseases has been added, similar to that found in Quincey's Dispensatory published more than a century ago; it may serve to aid the memory in the selection of remedies.

Seven pages that were devoted to a comparison of the strength of preparations in former Pharmacopœias with those of the British are no longer necessary, and are now omitted.

THE AUTHOR.

*July* 29, 1873.

# PREFACE

## TO THE TENTH EDITION.

It is just ten years since the British Pharmacopœia was first issued, and also since the publication of the "Companion." The Medical Council have now reprinted the British Pharmacopœia, and have appended to it an Addendum; the Author, therefore, has embodied these in the present Work, with such remarks as appear to him to be necessary.

In the previous Editions, the British of 1867 was compared with that of 1864 and the Pharmacopœias of London, Edinburgh, and Dublin Colleges, with the endeavour to introduce the Prescribers of the three Colleges to the British published by the authority of the Medical Council; and Prescribers have at length become so familiar with the British, that former Pharmacopœias are scarcely ever referred to. The Author has, therefore, discontinued comparisons with them, and has confined himself to those of the Pharmacopœias of Austria, Belgium, France, Germany, Russia, and the United States. In some of these the formulas are a good deal altered and improved; however, pains have been taken to secure the latest Editions, and Prescribers may with confidence refer to this Work when they wish to ascertain what preparations corresponding to our British Pharmacopœia are to be found in the several countries already alluded to.

The Classification of Remedies has been re-arranged and placed at the end of the book.

*October* 1, 1874.

# PREFACE

## TO THE ELEVENTH EDITION.

THIS Edition has had the advantage of being revised by three Editors, and is, therefore, as free from errors as it is possible to make a book. The recent issue of the British Pharmacopœia has been compared with latest Editions of the foreign Pharmacopœias, including the Danish, just published.

A large addition is made to the "Non-Official" Medicines which have been introduced since the issue of the Tenth Edition, 1874, and the Index made more copious; however, by omitting the formulas of several of the chemical preparations which are chiefly prepared on a large scale by the manufacturing Chemists, the book has been kept within reasonable bounds, and it is hoped may meet with the same approval as its predecessors have enjoyed.

There is an alteration in the title page, the Author having resigned the appointment he has held for more than forty years, being gazetted with the first Medical Staff in August, 1837, and Her Majesty has been graciously pleased to appoint his two sons jointly, gazetted July 17, 1877.

*September* 1, 1877.

# PREFACE

## TO THE TWELFTH EDITION.

THE Eleventh Edition was disposed of sooner than was expected, and the Work has consequently been out of print six months. A good deal of new matter has been introduced, as will be seen under Acids, Hyoscyamus, and other drugs. The important results from the elaborate experiments made by Dr. Rutherford to ascertain the action of certain drugs upon the liver, and also upon the intestines, are given in italics under the several drugs he employed. The solubilities of chemicals have been revised and rearranged. The Therapeutic Index is also improved, and the Spas of Europe have been added to, so that the work, on the whole, may fairly rank with its predecessors.

THE AUTHOR.

*January* 1, 1880.

# PREFACE

## TO THE THIRTEENTH EDITION.

THIS Edition has been delayed by the following circumstances: The *Sanitary Exhibition*, of which the Author was a juror; the *International Pharmaceutical Congress*, in which the Author took a prominent part, and at which Dr. Redwood and he were appointed (for Great Britain) to take part in forming an *International Pharmacopœia for Potent Medicines.* Meanwhile his sons have carefully revised the formulas of the Foreign Pharmacopœias by the latest Editions published, giving the American formulas *by weight* to better compare with the Continental. The British can be so compared by reckoning 16 ounces as the weight of 20 fluid ounces of Rectified Spirit, and 18 ounces as the weight of 20 fluid ounces of Proof Spirit. Additions have been made to the "Non-Officials" and the "Medicinal Properties" which it was considered might be useful.

*May* 1, 1882.

## THE WEIGHTS AND MEASURES OF THE BRITISH PHARMACOPŒIA,
### AT THE TEMPERATURE OF 60° FAHRENHEIT.

### Weights.

The Avoirdupois pound = 16 oz. = 7000 grs.
1 oz. = 437·5 grs.
1 gr. = 1 gr.

### Measures.

The Imperial gallon contains 277·274 cubic inches of distilled water 60° F.

| | | | | | | |
|---|---|---|---|---|---|---|
| C | 1 gallon | = 8 pints, | weighing | 10 pounds, | contains | 76,800 minims. |
| O | 1 pint | =20 fluid ounces | „ | 1¼ „ | „ | 9,600 „ |
| fl. oz. | 1 fluid ounce | = 8 fluid drachms | „ | 437·5 grains | „ | 480 „ |
| fl. dr. | 1 fluid drachm | =60 minims | „ | 54·68 „ | „ | 60 „ |
| ♏ | 1 minim | | „ | ·91 grain | „ | 1 minim. |

It must be remembered that the minim is less than the grain measure; hence, although in Tinct. Opii there is 1 in 13½ grain-measures, there is only 1 in 14⅞ minims.

To find the number of gallons any rectangular vessel will hold, multiply the length in inches by the breadth, and the product by the depth in inches, then divide the total by 277·274, which is the number of cubic inches contained in the gallon.

The British Pharmacopœia is for India and all the British colonies.

In the American Pharmacopœia only the troy ounce of 480 grains, and the grain, are used; the pound, drachm, and scruple are omitted. The measures have the same names as the British, but are different in value, the pint weighing 16 oz. 291·2 grains avoirdupois, and the fluid ounce 455·7 grains. In the formulas, the Acids and Oils are ordered by weight, other liquids by measure.

35¼ fluid ounces are contained in the French litre, but it is not used in the French Codex; all liquids are weighed in the formulas and also in dispensing.

The Prussian Pharmacopœia is now superseded by the Pharmacopœia Germanica used in the German Empire, and the formulas are stated in parts by weight, or in grammes; that of Orosi is used in Italy. In the Russian Pharmacopœia liquids as well as solids are weighed as in the other foreign Pharmacopœias, and the troy weight used; but the others use the gramme.

Graduated measures require testing before use, which is easily done with good weights and scales, and distilled water. Every fluid ounce ought to weigh an ounce avoirdupois, but there are two lines on the surface of a liquid; the upper one is that of capillary attraction to the sides of the vessel; the lower one the exact surface of the fluid. This should be on a line with the eye to measure accurately.

## WEIGHTS AND MEASURES EMPLOYED FOR MEDICINE IN ENGLAND, SCOTLAND, AND IRELAND.

Formerly the wine measure of 16 oz. to the pint, and the apothecaries' or troy weight were used for medicine.

We have now the imperial measure of 20 oz. to the pint, and the imperial pound of 16 oz., with 437·5 grs. to the oz., as ordered in the British Pharmacopœia, and the Act of Parliament insists that all sales shall be made by this imperial standard.

Permission has, however, been given to sell drugs by retail by the apothecaries' weight (troy weight).

The author has thought that, to avoid confusion, he had better confine himself in all the formulas to the oz. (=437·5 grs.) and grain for weight, and to the fluid oz. (weighing 437·5 grs.), fluid drachm, and minim for measure.

The British, published in 1867, reprinted in 1877, is in this work compared with the latest editions of the foreign Pharmacopœias, which are as follows:—

| | | | |
|---|---|---|---|
| Austrian . . . . | published | in | 1869 |
| Belgian . . . . . | ,, | ,, | 1854 |
| Danish . . . . . | ,, | ,, | 1869 |
| French . . . . . | ,, | ,, | 1866 |
| German . . . . . | ,, | ,, | 1872 |
| Russian . . . . . | ,, | ,, | 1880 |
| United States . . . | ,, | ,, | 1876 |

and are thus abbreviated—Austr., Belg., Dan., Fr., Ger., Russ., U.S.

The Russian and U.S. Pharmacopœias order the troy weight; it has, therefore, been thought desirable to give the following table of comparisons of troy and avoirdupois weights, to save the trouble of calculation:—

| Troy. | | | Avoirdupois. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12 | ounces | equal | 13 | ounces | and | 73 | grains | = 5760 | grains. |
| 11 | ,, | ,, | 12 | ,, | ,, | 30 | ,, | = 5280 | ,, |
| 10 | ,, | ,, | 10¾ | ,, | ,, | 97 | ,, | = 4800 | ,, |
| 9 | ,, | ,, | 9¾ | ,, | ,, | 54½ | ,, | = 4320 | ,, |
| 8 | ,, | ,, | 8¾ | ,, | ,, | 12 | ,, | = 3840 | ,, |
| 7 | ,, | ,, | 7½ | ,, | ,, | 79 | ,, | = 3360 | ,, |
| 6 | ,, | ,, | 6½ | ,, | ,, | 36½ | ,, | = 2880 | ,, |
| 5 | ,, | ,, | 5¼ | ,, | ,, | 103 | ,, | = 2440 | ,, |
| 4 | ,, | ,, | 4¼ | ,, | ,, | 61 | ,, | = 1920 | ,, |
| 3 | ,, | ,, | 3¼ | ,, | ,, | 18 | ,, | = 1440 | ,, |
| 2 | ,, | ,, | 2 | ,, | ,, | 85 | ,, | = 960 | ,, |
| 1 | ,, | ,, | 1 | ,, | ,, | 42½ | ,, | = 480 | ,, |

## EQUIVALENTS OF ENGLISH WEIGHTS TO FRENCH GRAMMES.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 pound avoirdupois | 7000 grains | or | 16 ounces | = | 453·592 | French | grammes. |
| | 6562·5 | or | 15 | = | 425·2425 | ” | ” |
| | 6125 | or | 14 | = | 396·8925 | ” | ” |
| | 5687·5 | or | 13 | = | 368·5435 | ” | ” |
| | 5250 | or | 12 | = | 340·1935 | ” | ” |
| | 4812·5 | or | 11 | = | 311·8445 | ” | ” |
| | 4375 | or | 10 | = | 283·495 | ” | ” |
| | 3937·5 | or | 9 | = | 255·1455 | ” | ” |
| | 3500 | or | 8 | = | 226·796 | ” | ” |
| | 3062·5 | or | 7 | = | 198.4465 | ” | ” |
| | 2625 | or | 6 | = | 170·097 | ” | ” |
| | 2187·5 | or | 5 | = | 141·7475 | ” | ” |
| | 1750 | or | 4 | = | 113·398 | ” | ” |
| | 1312·5 | or | 3 | = | 85·0485 | ” | ” |
| | 875 | or | 2 | = | 56·699 | ” | ” |
| 1 ounce, | 437·5 | or | 1 | = | 28·3495 | ” | ” |
| | 218·75 | or | ½ | = | 14·17475 | ” | ” |
| | 109·37 | or | ¼ | = | 7·08737 | ” | ” |
| | 15·43 | | | = | 1 | | |
| | 1·543 | | | = | ·1, a decigramme. | | |
| 1 grain, | 1 | | | = | ·0648 | | |
| | ·15 or ⅐ nearly | | | = | ·01, a centigramme. | | |
| | ·015 or 1/65 nearly | | | = | ·001, a milligramme (nearly). | | |

## MEASURES, EQUIVALENTS OF FRENCH GRAMMES TO ENGLISH WEIGHTS.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 Litre | = 1 kilogramme, | 1000 French grammes | = | 35 ounces | and | 120 | grains |
| | | 900 | = | 31 | and | 326¾ | ” |
| | | 800 | = | 28 | and | 96 | ” |
| | | 700 | = | 24 | and | 302¾ | ” |
| | | 600 | = | 21 | and | 72 | ” |
| | | 500 | = | 17 | and | 278¾ | ” |
| | | 400 | = | 14 | and | 48 | ” |
| | | 300 | = | 10 | and | 254¾ | ” |
| | | 200 | = | 7 | and | 24 | ” |
| 1 Decilitre | = 1 hectogramme, | 100 | = | 3 | and | 230¾ | ” |
| | | 90 | = | 3 | and | 76⅓ | ” |
| | | 80 | = | 2 | and | 359½ | ” |
| | | 70 | = | 2 | and | 205⅓ | ” |
| | | 60 | = | 2 | and | 51 | ” |
| | | 50 | = | 1 | and | 334 | ” |
| | | 40 | = | 1 | and | 179¾ | ” |
| | | 30 | = | 1 | and | 25½ | ” |
| | | 20 | = | | | 308⅔ | ” |
| 1 Centilitre | = 1 decagramme, | 10 | = | | | 154⅓ | ” |
| | | 5 | = | | | 77⅙ | ” |
| 1 Millilitre | = *1 gramme, | 1 | = | | nearly | 15½ | ” |
| | | ·5 | = | | ” | 7¾ | ” |
| | 1 decigramme, | ·1 | = | | ” | 1½ | ” |
| | | ·05 | = | | ” | ¾ | ” |
| | 1 centigramme, | ·01 | = | | ” | ⅐ | ” |
| | | ·005 | = | | ” | 1/13 | ” |
| | 1 milligramme, | ·001 | = | | ” | 1/65 | ” |

---

* The weight of a cubic centimetre of water at its greatest density, viz. at the temperature of 4° C. or 39·2° F.

NOTE.—In French, as in German and Russian dispensing, all liquids are weighed, not measured.

# METRICAL MEASURES.

## RELATION OF THE METRICAL MEASURES TO THE MEASURES OF THE BRITISH PHARMACOPŒIA.

1 Millimetre = 0·03937 inch.
1 Centimetre = 0·39371 „
1 Decimetre = 3·93708 inches.
1 Metre = 39·37079 „

1 Cubic Centimetre = 15·432 grain-measures.
1 Litre = 35¼ fl. oz. and 11 mins. or 15432·348 grain-measures.

---

## LENGTH.

1 Millimetre = the thousandth part of one metre, or 0·001 metre.
1 Centimetre = the hundredth „ 0·01 „
1 Decimetre = the tenth part „ 0·1 „
1 Metre = the ten-millionth part of a quarter of the circumference of the earth = 39·37079 inches.

1 Line = $\frac{1}{12}$ inch.
1 Inch = $\frac{1}{12}$ foot.
12 Inches = 1 foot.
36 „ = 3 feet = 1 yard.
Length of pendulum vibrating seconds of mean time in the latitude of London, in a vacuum at the level of the sea . 39·1393 inches.

It is remarkable that the English and French standards, taken from such different sources, should so nearly agree:—

The English, from the length of a pendulum vibrating seconds of mean time; from which the yard (36 inches) is computed . . 39·1393.

The French being the ten-millionth part of a quarter of the earth's meridian, and called a metre . . . . . . . . . . 39·37079.

---

## CAPACITY.

1 Millilitre = 1 cubic centimetre, or the measure of 1 gramme of water.
1 Centilitre = 10 „ centimetres „ 10 grammes „
1 Decilitre = 100 „ „ „ 100 „ „
1 Litre = 1000 „ „ „ 1000 „ (1 kilo.)

## TABLE OF COMPARISON OF THE FAHRENHEIT WITH THE CENTIGRADE* AND RÉAUMUR'S THERMOMETER.

| Fahr. | Cent. | Réau. | Fahr. | Cent. | Réau. | Fahr. | Cent. | Réau. |
|---|---|---|---|---|---|---|---|---|
| 212 | 100 | 80 | 136·4 | 58 | 46·4 | 60·8 | 16 | 12·8 |
| 210·2 | 99 | 79·2 | 134·6 | 57 | 45·6 | 59 | 15 | 12 |
| 208·4 | 98 | 78·4 | 132·8 | 56 | 44·8 | 57·2 | 14 | 11·2 |
| 206·6 | 97 | 77·6 | 131 | 55 | 44 | 55·4 | 13 | 10·4 |
| 204·8 | 96 | 76·8 | 129·2 | 54 | 43·2 | 53·6 | 12 | 9·6 |
| 203 | 95 | 76 | 127·4 | 53 | 42·4 | 51·8 | 11 | 8·8 |
| 201·2 | 94 | 75·2 | 125·6 | 52 | 41·6 | 50 | 10 | 8 |
| 199·4 | 93 | 74·4 | 123·8 | 51 | 40·8 | 48·2 | 9 | 7·2 |
| 197·6 | 92 | 73·6 | 122 | 50 | 40 | 46·4 | 8 | 6·4 |
| 195·8 | 91 | 72·8 | 120·2 | 49 | 39·2 | 44·6 | 7 | 5·6 |
| 194 | 90 | 72 | 118·4 | 48 | 38·4 | 42·8 | 6 | 4·8 |
| 192·2 | 89 | 71·2 | 116·6 | 47 | 37·6 | 41 | 5 | 4 |
| 190·4 | 88 | 70·4 | 114·8 | 46 | 36·8 | 39·2 | 4 | 3·2 |
| 188·6 | 87 | 69·6 | 113 | 45 | 36 | 37·4 | 3 | 2·4 |
| 186·8 | 86 | 68·8 | 111·2 | 44 | 35·2 | 35·6 | 2 | 1·6 |
| 185 | 85 | 68 | 109·4 | 43 | 34·4 | 33·8 | 1 | 0·8 |
| 183·2 | 84 | 67·2 | 107·6 | 42 | 33·6 | 32 | 0 | 0 |
| 181·4 | 83 | 66·4 | 105·8 | 41 | 32·8 | 30·2 | — 1 | — 0·8 |
| 179·6 | 82 | 65·6 | 104 | 40 | 32 | 28·4 | — 2 | — 1·6 |
| 177·8 | 81 | 64·8 | 102·2 | 39 | 31·2 | 26·6 | — 3 | — 2·4 |
| 176 | 80 | 64 | 100·4 | 38 | 30·4 | 24·8 | — 4 | — 3·2 |
| 174·2 | 79 | 63·2 | 98·6 | 37 | 29·6 | 23 | — 5 | — 4 |
| 172·4 | 78 | 62·4 | 96·8 | 36 | 28·8 | 21·2 | — 6 | — 4·8 |
| 170·6 | 77 | 61·6 | 95 | 35 | 28 | 19·4 | — 7 | — 5·6 |
| 168·8 | 76 | 60·8 | 93·2 | 34 | 27·2 | 17·6 | — 8 | — 6·4 |
| 167 | 75 | 60 | 91·4 | 33 | 26·4 | 15·8 | — 9 | — 7·2 |
| 165·2 | 74 | 59·2 | 89·6 | 32 | 25·6 | 14 | —10 | — 8 |
| 163·4 | 73 | 58·4 | 87·8 | 31 | 24·8 | 12·2 | —11 | — 8·8 |
| 161·6 | 72 | 57·6 | 86 | 30 | 24 | 10·4 | —12 | — 9·6 |
| 159·8 | 71 | 56·8 | 84·2 | 29 | 23·2 | 8·6 | —13 | —10·4 |
| 158 | 70 | 56 | 82·4 | 28 | 22·4 | 6·8 | —14 | —11·2 |
| 156·2 | 69 | 55·2 | 80·6 | 27 | 21·6 | 5 | —15 | —12 |
| 154·4 | 68 | 54·4 | 78·8 | 26 | 20·8 | 3·2 | —16 | —12·8 |
| 152·6 | 67 | 53·6 | 77 | 25 | 20 | 1·4 | —17 | —13·6 |
| 150·8 | 66 | 52·8 | 75·2 | 24 | 19·2 | — 0·4 | —18 | —14·4 |
| 149 | 65 | 52 | 73·4 | 23 | 18·4 | — 2·2 | —19 | —15·2 |
| 147·2 | 64 | 51·2 | 71·6 | 22 | 17·6 | — 4 | —20 | —16 |
| 145·4 | 63 | 50·4 | 69·8 | 21 | 16·8 | — 5·8 | —21 | —16·8 |
| 143·6 | 62 | 49·6 | 68 | 20 | 16 | — 7·6 | —22 | —17·6 |
| 141·8 | 61 | 48·8 | 66·2 | 19 | 15·2 | — 9·4 | —23 | —18·4 |
| 140 | 60 | 48 | 64·4 | 18 | 14·4 | —11·2 | —24 | —19·2 |
| 138·2 | 59 | 47·2 | 62·6 | 17 | 13·6 | —13 | —25 | —20 |

**Reductions from one scale to another are easily made by the following calculation:—**

**Fahrenheit to Centigrade, deduct 32, multiply by 5, and divide by 9.**
**Centigrade to Fahrenheit, multiply by 9, divide by 5, and add 32.**
**Réaumur to Fahrenheit, multiply by 9, divide by 4, and add 32.**

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*** Celsius first proposed this scale, which is also called "Celsius."**

## TABLE COMPARING THE PHARMACEUTICAL HYDROMETER WITH BEAUMÉ'S FOR SPIRIT,

### INDICATING AT THE SAME TIME THE SPECIFIC GRAVITY AND PERCENTAGE OF ALCOHOL BY WEIGHT AT A TEMPERATURE OF 15·5° CENTIGRADE=60° FAHRENHEIT.

| Pharmaceutical. | Beaumé's. | Specific gravity. | Percentage of absolute Alcohol (by weight). |
|---|---|---|---|
| 0 | 10 | 1·000 | 0· |
| 1 | 11 | 0·993 | 4·0 |
| 2 | 12 | 0·986 | 7·8 |
| 3 | 13 | 0·980 | 13·0 |
| 4 | 14 | 0·973 | 18·7 |
| 5 | 15 | 0·967 | 23·7 |
| 6 | 16 | 0·960 | 28·6 |
| 7 | 17 | 0·954 | 32·4 |
| 8 | 18 | 0·948 | 35·7 |
| 9 | 19 | 0·942 | 38·9 |
| 10 | 20 | 0·935 | 42·0 |
| 11 | 21 | 0·929 | 44·8 |
| 12 | 22 | 0·924 | 47·5 |
| 13 | 23 | 0·918 | 50·0 |
| 14 | 24 | 0·912 | 52·6 |
| 15 | 25 | 0·906 | 55·3 |
| 16 | 26 | 0·901 | 57·7 |
| 17 | 27 | 0·895 | 60·2 |
| 18 | 28 | 0·890 | 62·6 |
| 19 | 29 | 0·884 | 64·9 |
| 20 | 30 | 0·879 | 67·0 |
| 21 | 31 | 0·874 | 69·1 |
| 22 | 32 | 0·868 | 71·3 |
| 23 | 33 | 0·863 | 73·5 |
| 24 | 34 | 0·858 | 75·8 |
| 25 | 35 | 0·853 | 77·9 |
| 26 | 36 | 0·848 | 80·0 |
| 27 | 37 | 0·843 | 82·0 |
| 28 | 38 | 0·838 | 84·2 |
| 29 | 39 | 0·833 | 86·2 |
| 30 | 40 | 0·829 | 88·2 |
| 31 | 41 | 0·824 | 89·2 |
| 32 | 42 | 0·819 | 90·3 |
| 33 | 43 | 0·815 | 92·5 |
| 34 | 44 | 0·810 | 94·3 |
| 35 | 45 | 0·806 | 95·6 |
| 36 | 46 | 0·801 | 97·3 |
| 37 | 47 | 0·797 | 98·6 |
| 38 | 48 | 0·793 | 100·0 |
| 39 | 49 | 0·788 | |
| 40 | 50 | 0·784 | |
| 41 | 51 | 0·780 | |
| 42 | 52 | 0·776 | |
| 43 | 53 | 0·771 | |
| 44 | 54 | 0·767 | |
| 45 | 55 | 0·763 | |
| 46 | 56 | 0·759 | |
| 47 | 57 | 0·755 | |
| 48 | 58 | 0·752 | |
| 49 | 59 | 0·748 | |
| 50 | 60 | 0·744 | |
| 51 | 61 | 0·740 | |

## BEAUMÉ'S HYDROMETER COMPARED WITH THE SPECIFIC GRAVITY OF LIQUIDS HEAVIER THAN WATER.

1·000 BEING TAKEN AS THE SPECIFIC GRAVITY OF DISTILLED WATER AT 15·5° CENTIGRADE = 60° FAHRENHEIT.

| Beaumé. | Sp. G. |
|---|---|
| 0 | 1·000 |
| 1 | 1·007 |
| 2 | 1·014 |
| 3 | 1·021 |
| 4 | 1·028 |
| 5 | 1·036 |
| 6 | 1·043 |
| 7 | 1·051 |
| 8 | 1·058 |
| 9 | 1·066 |
| 10 | 1·074 |
| 11 | 1·082 |
| 12 | 1·090 |
| 13 | 1·098 |
| 14 | 1·107 |
| 15 | 1·115 |
| 16 | 1·124 |
| 17 | 1·133 |
| 18 | 1·142 |
| 19 | 1·151 |
| 20 | 1·160 |
| 21 | 1·169 |
| 22 | 1·179 |
| 23 | 1·188 |
| 24 | 1·198 |
| 25 | 1·208 |
| 26 | 1·218 |
| 27 | 1·229 |
| 28 | 1·239 |
| 29 | 1·250 |
| 30 | 1·261 |
| 31 | 1·272 |
| 32 | 1·283 |
| 33 | 1·294 |
| 34 | 1·306 |
| 35 | 1·318 |
| 36 | 1·330 |
| 37 | 1·342 |
| 38 | 1·355 |
| 39 | 1·367 |
| 40 | 1·380 |
| 41 | 1·394 |
| 42 | 1·407 |
| 43 | 1·421 |
| 44 | 1·435 |
| 45 | 1·449 |
| 46 | 1·464 |
| 47 | 1·479 |
| 48 | 1·494 |
| 49 | 1·510 |
| 50 | 1·526 |
| 51 | 1·542 |
| 52 | 1·558 |
| 53 | 1·575 |
| 54 | 1·593 |
| 55 | 1·610 |
| 56 | 1·628 |
| 57 | 1·647 |
| 58 | 1·666 |
| 59 | 1·685 |
| 60 | 1·705 |
| 61 | 1·725 |
| 62 | 1·746 |
| 63 | 1·767 |
| 64 | 1·789 |
| 65 | 1·811 |
| 66 | 1·834 |
| 67 | 1·857 |
| 68 | 1·882 |
| 69 | 1·906 |
| 70 | 1·932 |
| 71 | 1·958 |
| 72 | 1·984 |
| 73 | 2·011 |
| 74 | 2·040 |
| 75 | 2·069 |
| 76 | 2·099 |
| 77 | 2·130 |

SPECIFIC GRAVITY of Syrups, &c., may be tested with a ten-ounce measure. Ten measured ounces of simple syrup should weigh nearly thirteen ounces and one-third, representing the sp. g. 1·330.

In the formulas for the Syrups of the British Pharmacopœia they are directed to be made to a given weight, and the specific gravity is also stated. It can be easily ascertained what any of these weights would measure, by dividing the weight by the specific gravity; thus Syrupus Scillæ is directed to weigh 50 oz., and the specific gravity to be 1·330, then 1·330)50·000(37·5, or 37½ ounces by measure.

# MATERIA MEDICA TABLE

| B. P. Name. | Obtained from. | Natural Order. | Habitat. |
|---|---|---|---|
| Acacia | Acacia, undetermined species | Leguminosæ | Kordofan, in Eastern Africa |
| Aconitum | Aconitum Napellus | Ranunculaceæ | Germany or Britain |
| Adeps | Sus scrofa | Pachydermata | Domesticated everywhere |
| Aloe Barbadensis | Aloe vulgaris | Liliaceæ | Barbadoes |
| Aloe Socotrina | Aloe, undetermined species | Liliaceæ | Socotra (shipped by way of Bombay) |
| Ammoniacum | Dorema Ammoniacum | Umbelliferæ | Persia and the Punjaub |
| Amygdala Amara | Amygdalus communis | var. amara Rosaceæ | Mogadore |
| Amygdala Dulcis | Amygdalus communis | var. dulcis | Malaga |
| Amylum | Triticum vulgare | Graminaceæ | Indigenous |
| Anethi Fructus | Anethum graveolens | Umbelliferæ | England, middle and southern Europe |
| Anisi Oleum | Pimpinella Anisum<br>Illicium Anisatum | Umbelliferæ<br>Magnoliaceæ | Distilled in Europe<br>Distilled in China |
| Anthemidis Flores | Anthemis nobilis | Compositæ | Britain, wild and cultivated |
| Areca | Areca Catechu | Palmaceæ | East Indies |
| Armoraciæ Radix | Cochlearia Armoracia | Cruciferæ | Britain |
| Arnicæ Radix | Arnica montana | Compositæ | Mountainous parts of middle and southern Europe |
| Assafœtida | Narthex Assafœtida | Umbelliferæ | Afghanistan and Punjaub |
| Aurantii Cortex | Citrus Bigaradia | Aurantiaceæ | South of Europe |
| Balsamum Peruvianum | Myroxylon Pereiræ | Leguminosæ | Salvador, in Central America |
| Balsamum Tolutanum | Myroxylon Toluifera | Leguminosæ | New Granada |
| Belæ Fructus | Ægle Marmelos | Aurantiaceæ | Malabar and Coromandel |
| Belladonna | Atropa Belladonna | Atropaceæ | (Leaves) Britain, (Root) Britain, Germany |
| Benzoinum | Styrax Benzoin | Styraceæ | Siam and Sumatra |
| Buchu Folia | Barosma betulina<br>crenulata<br>serratifolia | Rutaceæ | Cape of Good Hope |
| Cajuputi Oleum | Melaleuca minor | Myrtaceæ | Imported from Batavia and Singapore |
| Calumbæ Radix | Jateorrhiza Calumba | Menispermaceæ | Eastern Africa, between Ibo and Zambesi |
| Cambogia | Garcinia Morella | Guttiferæ | Siam |
| Camphora | Camphora officinarum | Lauraceæ | China and Japan (purified here) |
| nellæ Albæ Cortex | Canella alba | Canellaceæ | West Indies |
| [illegible]bis Indica | Cannabis sativa | Cannabinaceæ | India |

# THE ORGANIC KINGDOM.

| Parts used. | Preparations into which it enters. |
|---|---|
| . . . . . . . . . . | Mist. Cretæ; Mist. Guaiaci; Mucilago Acaciæ; Pulv. Amygdalæ Co. and Pulv. Tragacanth Co. All Trochisci. |
| eaves and flowering tops, dried root . . . . | Fresh leaves and flowering tops = Extract.<br>Root = Linimentum, Tinctura, and Aconitia. |
| fat of the abdomen . . | Adeps Benzoatus; Empl. Canthar.; All Unguenta except Canth.; Cetacei; Hyd. Ox. Rub.; Picis; Plumb. Subacet. Comp. |
| ed juice of the leaf . . | Enema Aloes; Ext. Aloes Barb.; Pilulæ Aloes Barb.; Pil. Aloes et Ferri; Pil. Cambogiæ Comp.; Pil. Colocynthidis Co.; Pil. Colocynthidis et Hyoscyami. |
| ed juice of the leaf . . | Decoct. Aloes Co.; Enema Aloes; Ext. Aloes Socotrinæ; Ext. Coloc. Co.; Pil. Aloes et Assafœtidæ; Pil. Aloes et Myrrhæ; Pil. Aloes Socot.; Pil. Rhei Co.; Tinct. Aloes; Tinct. Benzoini Co.; Vinum Aloes. |
| inous exudation . . . | Emplastrum Ammoniaci c. Hydrargyro; Emplast. Galbani; Mistura Ammoniaci; Pilula Scillæ Co.; Pil. Ipecac. c. Scillâ. |
| e seed . . . . . . . | Unguenta, Cetacei; Hyd. Ox. Rub.; Plumb. Subacet. Comp.; Simplex |
| the oil . . . . . . | Oleum Amygdalæ; Pulvis Amygdalæ Compositus. |
| om seed . . . . . . | Glycerinum Amyli; Mucilago Amyli; Pulvis Tragacanth. Co. |
| . . . . . . . . . | Aqua Anethi; Oleum Anethi. |
| the fruit . . . . . . | Ess. Anisi; Tinct. Camph. Co.; Tinct. Opii Ammoniata. |
| and double flower-heads d) . . . . . . . . | Extractum, Infusum, Oleum Anthemidis. |
| ot . . . . . . . . . | Spiritus Armoraciæ Compositus. |
| izome and rootlets . . . | Tinctura Arnicæ. |
| in . . . . . . . . . | Enema Assafœtidæ; Pil. Aloes et Assafœtidæ; Pil. Assafœtidæ Co.; Spiritus Ammoniæ Fœtidus; Tinctura Assafœtidæ. |
| and dried outer part of rind of the ripe fruit . | Inf. Aurantii, Inf. Aurantii Comp.; Inf. Gentian. Comp.; Mist. Gentianæ; Tinct. Aurantii; Tinct. Aur. Rec.; Tinct. Gentian. Comp.; Tinct. Cinchon. Comp.; Spirit. Armoraciæ Comp. |
| . . . . . . . . . . | Syrupus Tolutanus; Tinct. Benzoini Co.; Tinct. Tolutana. |
| lf-ripe fruit . . . . . | Extractum Belæ Liquidum. |
| , with or without ches, and root . . . | Leaves and branches = Extract.; Succus; Leaves = Tinct. Belladonnæ. Root = Linimentum Belladonnæ, Atropia. |
| resin . . . . . . . | Acidum Benzoicum; Adeps Benzoatus; Tinct. Benzoini Co. |
| ves . . . . . . . . | Infusum, Tinctura. |
| the leaves . . . . . | Spiritus Cajuputi, Lin. Crotonis. |
| t . . . . . . . . . | Extractum, Infusum, and Tinct. Calumbæ; Mist. Ferri Aromat. |
| in . . . . . . . . | Pilula Cambogiæ Composita. |
| e volatile oil from the wood | Aqua; Linimentum; Linimentum Co.; Spiritus; Tinct. Co.; Ung. Plumb. Acet. Co.; Ung. Hydrarg. Co.; and all the liniments except Ammoniæ, Calcis, Crotonis, Potassii Iodidi c. Sapone. |
| . . . . . . . . . . | Vinum Rhei. |
| wering tops of female plants | Extractum, Tinctura. |

| B. P. Name. | Obtained from. | Natural Order. | Habitat. |
|---|---|---|---|
| Cantharis . . . . | Cantharis vesicatoria . . | Coleoptera . . | Hungary . . . . . . . . |
| Capsici Fructus . . | Capsicum fastigiatum . . | Solanaceæ . . | Zanzibar . . . . . . . . |
| Cardamomum . . | Elettaria Cardamomum . | Zingiberaceæ . | Malabar . . . . . . . . |
| Carui Fructus . . | Carum Carui . . . . . | Umbelliferæ . | England and Germany . . . |
| Caryophyllum . . | Caryophyllus aromaticus . | Myrtaceæ . . | Penang, Bencoolen, and Amboyna . . . . . |
| Cascarillæ Cortex . | Croton Eluteria . . . . | Euphorbiaceæ . | Bahama Islands . . . . . |
| Cassiæ Pulpa . . | Cassia Fistula . . . . | Leguminosæ . . | East and West Indies . . . |
| Castoreum . . . | Castor Fiber . . . . . | Rodentia . . . | Hudson's Bay Territory . . |
| Catechu pallidum . | Uncaria Gambir . . . . | Cinchonaceæ . | Singapore, and other places in the Eastern Archipelago |
| Cera Flava . . . | Apis mellifica . . . . . | Hymenoptera . | Indigenous . . . . . . . |
| Cetaceum . . . | Physeter macrocephalus . | Cetacea . . . | Pacific and Indian Oceans . |
| Cetraria . . . . | Cetraria Islandica . . . | Lichenes . . . | North of Europe . . . . . . |
| Chirata . . . . | Ophelia Chirata . . . . | Gentianaceæ . | Northern India . . . . . . |
| Cinchonæ Flavæ Cortex . . . | Cinchona Calisaya . . . | Cinchonaceæ . | Bolivia and Southern Peru . |
| Cinchonæ Pallidæ Cortex . . . | Cinchona Condaminea . . | Cinchonaceæ . | Loxa in Ecuador . . . . . |
| Cinchonæ Rubræ Cortex . . . | Cinchona succirubra . . | Cinchonaceæ . | Western slopes of Chimborazo |
| Cinnamomi Cortex . | Cinnamomum Zeylanicum | Lauraceæ . . | Ceylon . . . . . . . . . |
| Coccus . . . . | Coccus Cacti . . . . . | Hemiptera . . | Mexico and Teneriffe . . . |
| Colchicum . . . | Colchicum autumnale . . | Melanthaceæ . | Indigenous . . . . . . . . |
| Colocynthidis Pulpa | Citrullus Colocynthis . . | Cucurbitaceæ . | Smyrna, Trieste, France, and Spain . . . . . |
| Conii Folia . . . | Conium maculatum . . . | Umbelliferæ . | Britain . . . . . . . . |
| Copaiba . . . . | Copaifera multijuga . . | Leguminosæ . | Valley of the Amazon . . . |
| Coriandri Fructus . | Coriandrum sativum . . | Umbelliferæ . | Britain . . . . . . . . |
| Crocus . . . . | Crocus sativus . . . . | Iridaceæ . . . | Spain, France, and Italy . . |
| Croton . . . . | Croton Tiglium . . . . | Euphorbiaceæ . | Hindostan, Ceylon, and Indian Archipelago . |
| Cubeba . . . . | Cubeba officinalis . . . | Piperaceæ . . | Java . . . . . . . . . |
| Cuspariæ Cortex . | Galipea Cusparia . . . | Rutaceæ . . . | Tropical South America . . |
| Cusso . . . . . | Brayera anthelmintica . . | Rosaceæ . . . | Abyssinia . . . . . . . . |
| Digitalis Folia . . | Digitalis purpurea . . . | Scrophulariaceæ | Indigenous . . . . . . . |
| Dulcamara . . . | Solanum Dulcamara . . | Solanaceæ . . | Indigenous . . . . . . . |
| Ecbalii Fructus . . | Ecbalium officinarum . . | Cucurbitaceæ . | South of Europe . . . . . |
| Elemi . . . . . | Canarium commune . . . | Amyridaceæ . . | Manilla . . . . . . . . |

| Parts used. | Preparations into which it enters. |
|---|---|
| The dried Beetle | Acetum, Emplastrum, Tinctura, Unguentum Cantharid Charta Epispastica; Liquor Epispast.; Emplast. Calefacie |
| Dried ripe fruit | Tinctura Capsici. |
| Seeds of the dried capsules | Tinct. Cardam. Co.; Ext. Coloc. Co.; Pulv. Cinnam. C Pulv. Cretæ Arom.; Tinct. Gentian. Co.; Tinct. Rh Vinum Aloes. |
| Dried fruit | Aqua, Oleum Carui; Confectio Opii; Conf. Piperis; Pul Opii Compositus; Tinct. Cardam. Co.; Tinct. Sennæ. |
| Dried unexpanded flower-buds | Infusum, Oleum Caryophylli; Inf. Aurant. Co.; Mist. Fe Arom.; Vinum Opii. |
| Bark | Infusum, Tinctura Cascarillæ. |
| Pulp from the pods | Confectio Sennæ. |
| Dried preputial follicles, and their secretion from the Beaver | Tinctura Castorei. |
| An extract of the leaves and young shoots | Infusum, Pulvis Comp., Tinctura, and Trochisci Catechu. |
| Honeycomb | Emplast. Calefaciens, Cantharidis, Cerati Saponis, Galba Picis; Unguenta Cantharidis, Hydrarg. Co., Hyd. O Rub., Picis Liquid., Resinæ, Sabinæ, Terebinthinæ. |
| Nearly pure Cetine, mixed with oil, obtained from the head of the Sperm Whale | Charta Epispastica; Unguentum Cetacei. |
| The entire lichen | Decoctum Cetrariæ. |
| Entire plant | Infusum and Tinctura Chiratæ. |
| Bark | Decoctum, Extractum Liquidum, Infusum, and Tinctu Cinchonæ Flavæ; Quiniæ Sulphas. |
| Bark | Mist. Ferri Aromat.; Tinctura Cinchonæ Composita. |
| Bark | No preparation. |
| The inner bark of shoots from the truncated stocks | Aqua, Oleum, Pulvis Co., and Tinct. Cinnamomi; Infusu Pulvis Co., and Tinct. Catechu; Acid. Sulph. Arom.; D coct. Hæmatoxyli; Pulv. Cretæ Arom.; Pulv. Kino C Tinct. Cardam. Co.; Tinct. Lavand. Co.; Vinum Opii. |
| Dried female insect | Tinctura Cocci; Tinct. Cardam. Co.; Tinct. Cinchonæ Co. |
| Fresh and dried corm and ripe seed | Corm = Extractum, Extractum Aceticum, Vinum Colchic<br>Seeds = Tinctura Colchici Seminum. |
| Dried decorticated fruit freed from seeds | Extractum Coloc. Co.; Pil. Coloc. Co.; Pil. Coloc. et Hyoscya |
| Fresh leaves and young branches, and dried ripe fruit | Cataplasma, Extractum, Succus Conii (from the leave Tinctura Conii (from the fruit). |
| Oleo-resin | Oleum Copaibæ. |
| Dried ripe fruit | Oleum Coriandri; Conf. Sennæ; Mist. Gentianæ; Syrup et Tinct. Rhei; Syrupus et Tinct. Sennæ. |
| The dried stigma and part of the style | Tinctura Croci; Decoct. Aloes Co.; Pil. Aloes et Myrrh Pulv. Cretæ Aromat.; Tinct. Cinchon. Co.; Tinct. O Ammon.; Tinct. Rhei. |
| Oil from the seeds | Oleum, Linimentum. |
| Dried unripe fruit | Oleum, Tinctura. |
| Bark | Infusum Cuspariæ. |
| Flowers and tops | Infusum Cusso. |
| Dried leaf | Infusum, Tinctura, Digitalis; Digitalinum. |
| Dried young branches | Infusum Dulcamaræ. |
| Nearly ripe fruit | Elaterium, Pulvis Elaterii Compositus. |
| A concrete resinous exudation | Unguentum Elemi. |

| B. P. Name. | Obtained from. | Natural Order. | Habitat. |
|---|---|---|---|
| **Ergota** | Secale cereale | Graminaceæ | Indigenous |
| **Farina Tritici** | Triticum vulgare | Graminaceæ | Indigenous |
| **Fel Bovinum Purificatum** | Bos Taurus | Ruminantia | Domesticated everywhere |
| **Ficus** | Ficus Carica | Moraceæ | Smyrna |
| **Filix-Mas** | Aspidium Filix-mas | Filices | Indigenous |
| **Fœniculi Fructus** | Fœniculum dulce | Umbelliferæ | Malta |
| **Galbanum** | Plant undetermined (*Species of Ferula, Hanbury*) | Umbelliferæ | India and the Levant |
| **Galla** | Quercus infectoria | Cupuliferæ | Asia Minor |
| **Gentianæ Radix** | Gentiana lutea | Gentianaceæ | Central and Southern Europe (mountains) |
| **Glycyrrhizæ Radix** | Glycyrrhiza glabra | Leguminosæ | England |
| **Gossypium** | Gossypium, various species | Malvaceæ | Warm and tropical regions |
| **Granati Radicis Cortex** | Punica Granatum | Granateæ | South of Europe |
| **Guaiaci Lignum** | Guaiacum officinale | Zygophyllaceæ | St. Domingo and Jamaica |
| **Guaiaci Resina** | Guaiacum officinale | | |
| **Gutta Percha** | Isonandra Gutta | Sapotaceæ | Eastern Islands |
| **Hæmatoxyli Lignum** | Hæmatoxylum Campechianum | Leguminosæ | Campeachy, Honduras, and Jamaica |
| **Hemidesmi Radix** | Hemidesmus Indicus | Asclepiadaceæ | India |
| **Hirudo** | Sanguisuga medicinalis (speckled)<br>Sanguisuga officinalis (green) | Sanguisuga | Spain, France, Italy, Hungary |
| **Hordeum Decorticatum** | Hordeum distichon | Graminaceæ | Britain |
| **Hyoscyami Folia** | Hyoscyamus niger | Atropaceæ | Britain |
| **Ipecacuanha** | Cephaëlis Ipecacuanha | Cinchonaceæ | Brazil |
| **Jalapa** | Exogonium Purga | Convolvulaceæ | Mexico |
| **Juniper** | Juniperus communis | Coniferæ | North of Europe, indigenous |
| **Kamala** | Rottlera tinctoria | Euphorbiaceæ | India |
| **Kino** | Pterocarpus Marsupium | Leguminosæ | Malabar |
| **Krameriæ Radix** | Krameria triandra | Polygalaceæ | Peru |
| **Lac** | Bos Taurus | Ruminantia | Domesticated everywhere |
| **Lactuca** | Lactuca virosa | Compositæ | Indigenous |
| **Laricis Cortex** | Larix Europæa | Coniferæ | Indigenous |
| **Laurocerasi Folia** | Prunus Laurocerasus | Rosaceæ | Britain |
| **Lavandula** | Lavandula vera | Labiatæ | South of Europe |
| **Limon** | Citrus Limonum | Aurantiaceæ | South of Europe |
| **Lini Semina** | Linum usitatissimum | Linaceæ | Britain |
| **Lobelia** | Lobelia inflata | Lobeliaceæ | North America |
| **[illegible]** | Humulus Lupulus | Cannabinaceæ | England |

| Parts used. | Preparations into which it enters. |
|---|---|
| lerotium (compact myce- or spawn) of *Claviceps urea*, produced within paleæ of the common (*Secale cereale*) | Extractum Liquidum, Infusum, and Tinctura Ergotæ. |
| in of wheat ground and sifted | Cataplasma Fermenti. |
| ified gall. | |
| uit | Confectio Sennæ. |
| izome | Extractum Filicis Liquidum. |
| | Aqua Fœniculi. |
| sin | Emplast. Galbani; Pil. Assafœtidæ Co. |
| cences caused by the tures and deposited ova *iplolepis Gallæ Tinctoriæ* | Acidum Gallicum and Tannicum; Tinct., Ung., and Ung. Gallæ c. Opio. |
| ot | Extractum, Infusum Co., Mistura, and Tinct. Gentianæ Co. |
| nd underground stem, and dried | Extract. et Ext. Liquid.; Pulv. Glycyrrh. Co.; Conf. Tereb. Dec. Sarsæ Co.; Inf. Lini; Pil. Hydr.; Pil. Ferri Iodid. |
| the seed | Pyroxylin. |
| ark of the root | Decoctum Granati Radicis. |
| in chips | Decoct. Sarsæ Co. |
| | Mist. Guaiaci; Pil. Hydrarg. Subchlor. Co.; Tinct. Guaiaci Ammon. |
| e juice | Liquor Guttæ Perchæ. |
| eart-wood | Decoctum and Extractum Hæmatoxyli. |
| ot | Syrupus Hemidesmi. |
| seeds | Decoctum Hordei. |
| with or without branches | Extractum, Succus, and Tinctura Hyoscyami. |
| ot | Pil. Ipecac. c. Scillâ; Pulv. Ipecac. Co.; Trochisci Ipecac.; Trochisci Morphiæ et Ipecac.; Vinum Ipecac.; Pil. Conii Co. |
| ibercles | Extractum, Pulv. Co., Resina, and Tinctura Jalapæ; Pulvis Scammonii Compositus. |
| the unripe fruit | Oleum, Spiritus. |
| glands that cover the iles. | |
| ted juice | Pulvis Compositus, Tinct. Kino; Pulv. Catechu Co. |
| ot | Extractum, Infusum, Tinctura Krameriæ; Pulv. Catechu Co. |
| ilk | Mistura Scammonii. |
| ng herb | Extractum Lactucæ. |
| rk | Tinct. Laricis. |
| aves | Aqua Laurocerasi. |
| the flowers | Oleum, Spiritus, and Tinctura Composita. |
| l juice | Cortex = Oleum, Syrupus, Tinctura Limonis; Inf. Aurant. Co.; Inf. Gentian. Co.; Succus = Syrupus Limonis. |
| and cake from which the as been pressed | Infusum Lini, Oleum; Cataplasmata except Fermenti. |
| owering herb | Tinctura Lobeliæ. Tinct. Lobeliæ Æetherea. |
| robiles of the female plant | Extractum, Infusum, Tinctura Lupuli. |

| B. P. Name. | Obtained from. | Natural Order. | Habitat. |
|---|---|---|---|
| **Manna** | Fraxinus { Ornus<br>rotundifolia } | Oleaceæ | Calabria and Sicily |
| **Mastiche** | Pistacia Lentiscus | Anacardiaceæ | Island of Scio |
| **Maticæ Folia** | Artanthe elongata | Piperaceæ | Peru |
| **Mel** | Apis mellifica | Hymenoptera | Universally domesticated |
| **Mentha piperita** | Mentha piperita | Labiatæ | Britain |
| **Mentha viridis** | Mentha viridis | Labiatæ | Britain |
| **Mezerei Cortex** | Daphne { Mezereum<br>Laureola } | Thymelaceæ | Indigenous |
| **Mica Panis** | Triticum vulgare | Graminaceæ | Indigenous |
| **Mori Succus** | Morus nigra | Moraceæ | Cultivated in Britain; native of Persia and China |
| **Morrhuæ Oleum** | Gadus Morrhua | (Genus)Acipenser | Coasts of Norway, France, and England, Newfoundland and Labrador |
| **Moschus** | Moschus moschiferus | Ruminantia | Native of Central Asia; imported from China and India |
| **Myristica** | Myristica officinalis | Myristicaceæ | Banda Islands of the Malayan Archipelago |
| **Myrrha** | Balsamodendron Myrrha | Amyridaceæ | Arabia Felix and Abyssinia |
| **Nectandræ Cortex** | Nectandra Rodiæi | Lauraceæ | British Guiana |
| **Nux Vomica** | Strychnos Nux-vomica | Loganiaceæ | East Indies |
| **Olivæ Oleum** | Olea Europæa | Oleaceæ | South of Europe |
| **Opium** | Papaver somniferum | Papaveraceæ | Asia Minor (Smyrna) |
| **Ovi Vitellus** | Gallus Banckiva | (Class) Aves | Domesticated everywhere |
| **Papaveris Capsulæ** | Papaver somniferum | Papaveraceæ | Britain |
| **Pareiræ Radix** | Cissampelos Pareira (*Chondodendron tomentosum, Hanbury*) | Menispermaceæ | Brazil |
| **Physostigmatis Faba** | Physostigma venenosum | Leguminosæ | Western Africa |
| **Pimenta** | Eugenia Pimenta | Myrtaceæ | West Indies |
| **Piper nigrum** | Piper nigrum | Piperaceæ | East Indies |
| **Pix Burgundica** | Abies excelsa | Coniferæ | Germany |
| **Pix liquida** | Pinus sylvestris | Coniferæ | Scotland,Denmark,and Norw |
| **Podophylli Radix** | Podophyllum peltatum | Ranunculaceæ (*Berberideæ, Hanbury*) | North America |
| **Prunum** | Prunus domestica | Rosaceæ | Southern Europe |
| **Pterocarpi Lignum** | Pterocarpus santalinus | Leguminosæ | Ceylon |
| **Pyrethri Radix** | Anacyclus Pyrethrum | Compositæ | Levant |
| **Quassiæ Lignum** | Picræna excelsa | Simarubaceæ | Jamaica |
| **Quercus Cortex** | Quercus pedunculata | Cupuliferæ | Britain |
| **Resina** | Pinus et Abies | Coniferæ | America |
| **Rhamni Succus** | Rhamnus catharticus | Rhamnaceæ | Britain |
| **Rhei Radix** | Rheum, undetermined species | Polygonaceæ | China, Chinese Tartary, and Thibet. Imported from Shanghai and Canton; brought overland by way of Moscow |
| **hœados Petala** | Papaver Rhœas | Papaveraceæ | Indigenous |

| Parts used. | Preparations into which it enters. |
|---|---|
| ete saccharine exudation m the stem. | |
| us exudation from the stem. | |
| eaves | Infusum Maticæ. |
| arine secretion in honey-ab, purified | Mel Boracis; Oxymel; Oxymel Scillæ; Conf. Piper.; Conf. Scammon.; Conf. Tereb. |
| d Oil | Aqua, Essentia, Spiritus Menthæ Piperitæ; Pil. Rhei Co. |
| d Oil | Aqua Menthæ Viridis. |
| bark | Extractum Mezerei Æthereum; Decoctum Sarsæ Compositum. |
| of bread of wheat flour | Cataplasma Carbonis. |
| f ripe fruit | Syrupus Mori. |
| fresh liver of the Cod. | |
| ssated and dried secretion the preputial follicles. | |
| l of the seed | Oleum, and Oleum Myristicæ Expressum; Pulv. Catech Co.; Pulv. Cretæ Aromat.; Sp. Armoraciæ Co.; Tinct Lavand. Co. |
| esin (from the stem) | Tinct. Myrrh.; Pil. Aloes et Myrrh.; Decoct. Aloes Co. Mist. Ferri Co.; Pil. Assafœtidæ Co.; Pil. Rhei Co. |
| | Beberiæ Sulphas. |
| | Extractum, Tinctura Nucis Vomicæ; Strychnia. |
| m the fruit | Charta Epispastica; Cataplasma Lini; Emplastra; Enema Mag Sulph.; Lin. Ammon., Calcis, Camphoræ; Unguenta, several |
| ssated juice from unripe sules | Preparations many. *Vide* Opium. |
| | Mistura Spiritus Vini Gallici. |
| ly ripe dried capsules of hite Poppy | Decoctum, Extractum, Syrupus Papaveris. |
| root | Decoctum, Extractum, Extractum Pareiræ Liquidum. |
| | Extractum Physostigmatis. |
| unripe berries | Aqua, Oleum Pimentæ; Syrupus Rhamni. |
| unripe berries | Confectio Opii; Confectio Piperis; Pulv. Opii Co. |
| us exudation from the stem | Emplastrum Ferri; Emplastrum Picis. |
| minous liquid obtained m the wood | Unguentum Picis Liquidæ. |
| rhizome | Resina Podophylli. |
| drupe of the Plum | Confectio Sennæ. |
| | Tinctura Lavandulæ Composita. |
| | Tinctura Pyrethri. |
| | Extractum, Infusum, Tinctura Quassiæ. |
| bark of young tree | Decoctum Quercus. |
| | Emplastrum, Unguentum. |
| h expressed juice of the e berries | Syrupus Rhamni. |
| root deprived of the bark | Extractum, Infusum, Pilula Co., Pulvis Co., Syrupus, Tinctura, Vinum. |
| petals | Syrupus Rhœados. |

| B. P. Name. | Obtained from. | Natural Order. | Habitat. |
|---|---|---|---|
| **Ricinus** | Ricinus communis | Euphorbiaceæ | India |
| **Rosæ Caninæ Fructus** | Rosa canina | Rosaceæ | Indigenous |
| **Rosæ Centifoliæ Petala** | Rosa centifolia | | Britain |
| **Rosæ Gallicæ Petala** | Rosa Gallica | | Britain |
| **Rosmarinus** | Rosmarinus officinalis | Labiatæ | South of Europe, Asia Minor; cultivated in England |
| **Ruta** | Ruta graveolens | Rutaceæ | South of Europe |
| **Sabadilla** | Asagræa officinalis | Melanthaceæ | Mexico |
| **Sabinæ Cacumina** | Juniperus Sabina | Coniferæ | Britain |
| **Saccharum Purif.** | Saccharum officinarum | Graminaceæ | West Indies |
| **Saccharum Lactis** | Bos Taurus | Ruminantia | Domesticated everywhere |
| **Sambuci Flores** | Sambucus nigra | Caprifoliaceæ | Indigenous |
| **Santonica** | Artemisia, undetermined species (*Maritima*, *Hanbury*) | Compositæ | Russia |
| **Sarsæ Radix** | Smilax officinalis | Smilaceæ | Native of Central America; imported from Jamaica |
| **Sassafras Radix** | Sassafras officinale | Lauraceæ | North America |
| **Scammoniæ Radix** | Convolvulus Scammonia | Convolvulaceæ | Syria and Asia Minor |
| **Scammonium** | Convolvulus Scammonia | Convolvulaceæ | Asia Minor |
| **Scilla** | Urginea Scilla | Liliaceæ | Mediterranean coasts |
| **Scoparii Cacumina** | Sarothamnus Scoparius | Leguminosæ | Indigenous |
| **Senegæ Radix** | Polygala Senega | Polygalaceæ | North America |
| **Senna Alexandrina** | Cassia lanceolata<br>Cassia obovata | Leguminosæ | Alexandria |
| **Senna Indica** | Cassia elongata | Leguminosæ | Southern India |
| **Serpentariæ Radix** | Aristolochia Serpentaria | Aristolochiaceæ | Southern parts of North America |
| **Sinapis** | Sinapis alba<br>Sinapis nigra | Cruciferæ | Indigenous |
| **Stramonium** | Datura Stramonium | Atropaceæ | Britain |
| **Styrax præparatus** | Liquidambar orientale | Liquidambaraceæ | South-west of Asia Minor, and Cyprus |
| **Sumbul Radix** | Plant unknown (*Euryangium Sumbul*, *Hanbury*) | Umbelliferæ | Russia and India |
| **Tabaci Folia** | Nicotiana Tabacum | Atropaceæ | America |
| **Tamarindus** | Tamarindus Indica | Leguminosæ | West Indies |
| **Taraxaci Radix** | Taraxacum Dens-leonis | Compositæ | Britain |
| **Terebinthina Canadensis** | Abies balsamea | Coniferæ | Canada |
| **Theobromæ Oleum** | Theobroma Cacao | Sterculiaceæ | America |
| **Theriaca** | Saccharum officinarum | Graminaceæ | West Indies and elsewhere |
| **Thus Americanum** | Pinus Tæda<br>Pinus palustris | Coniferæ | Southern States of North America |
| **Tragacantha** | Astragalus verus | Leguminosæ | Asia Minor |
| **Ulmi Cortex** | Ulmus campestris | Ulmaceæ | Britain |
| **Uvæ Ursi Folia** | Arctostaphylos Uvæ Ursi | Ericaceæ | Indigenous |
| **Uvæ** | Vitis vinifera | Vitaceæ | Spain |
| **Valerianæ Radix** | Valeriana officinalis | Valerianaceæ | Britain |
| **Veratria** | Asagræa officinalis | Melanthaceæ | Mexico |
| **Veratri Viridis Radix** | Veratrum viride | Melanthaceæ | United States and Canada |
| **[illegible]iber** | Zingiber officinale | Zingiberaceæ | West Indies and India |

| Parts used. | Preparations into which it enters. |
|---|---|
| Oil from the seeds | Oil. |
| Ripe fruit | Confectio Rosæ Caninæ. |
| Fresh petals | Aqua Rosæ. |
| Fresh and dried unexpanded petals. | Confectio, Syrupus Rosæ Gallicæ; Infusum Rosæ Acidum. |
| Oil from the fresh herb | Oleum, Spiritus Rosmarini. |
| Oil from fresh leaves and unripe fruit | Oleum. |
| Dried fruit | Veratria. |
| Fresh and dried tops | Oleum, Tinctura, Unguentum Sabinæ. |
| Juice of the stem | All Syrups and Lozenges. |
| Whey of milk, evaporated. | |
| Fresh flowers | Aqua Sambuci. |
| Unexpanded flower-heads | Santoninum. |
| Dried root | Decoctum, Decoct. Co., Extractum Sarsæ Liquidum. |
| Dried root | Decoctum Sarsæ Co. |
| Dried root and resin | Resina; Mistura Scam.; Pilula Scam. Co.; Extr. Coloc. Co. |
| Gum-resin | Confectio; Pulvis Co.; Pil. Coloc. Co.; Pil. Col. Co. et Hyoscyam. |
| Sliced and dried bulb | Acetum, Oxymel, Pilula Co., Syrupus, Tinctura Scillæ; Pil. Ipecac. c. Scillâ. |
| Fresh and dried tops | Decoctum, Succus Scoparii. |
| Dried root | Infusum and Tinctura Senegæ. |
| Leaflets | Confectio, Infusum, Mistura Co., Syrupus, Tinctura Sennæ; Pulvis Glycyrrhizæ Compositus. |
| Leaflets | May be used in the place of Alexandrian. |
| Dried rhizome | Infusum, Tinctura Serpentariæ; Tinct. Cinchon. Co. |
| Seeds | Cataplasma, Charta, Oleum Sinapis. |
| Dried leaves and ripe seeds | Seeds = Extractum, Tinctura Stramonii. |
| Balsam from the bark | Tinctura Benzoini Composita. |
| Root | Tinctura Sumbul. |
| Dried leaves | Enema Tabaci. |
| Pulp of the fruit | Confectio Sennæ. |
| Fresh and dried roots | Decoctum, Extractum, Succus Taraxaci. |
| Turpentine (Canada Balsam) | Charta Epispastica; Collodion Flexile. |
| Concrete oil | Suppositoria. |
| Uncrystallizable residue of the refining of sugar | Various Pill-masses. |
| Concrete Turpentine | Emplastrum Picis. |
| Gummy exudation | Mucilago, Pulv. Tragac. Co.; Conf. Opii; Pulv. Opii Co. |
| Dried inner bark | Decoctum Ulmi. |
| Dried leaves | Infusum Uvæ Ursi. |
| Ripe fruit | Tinct. Cardam. Co.; Tinct. Sennæ. |
| Dried root | Infusum, Tinctura, Tinctura Valerianæ Ammoniata. |
| The alkaloid from Cevadilla | Unguentum Veratriæ. |
| Dried rhizome | Tinctura Veratri Viridis. |
| Scraped and dried rhizome | Syrupus, Tinctura, Tinctura Zingiberis Fortior. It is also used in some powders and other preparations. |

## SYMBOLS AND EQUIVALENT WEIGHTS OF THE ELEMENTARY BODIES MENTIONED IN THE BRITISH PHARMACOPŒIA.

| Elementary Bodies. | Symbols and Equivalents. | |
|---|---|---|
| | Old System. | New System. |
| Aluminium | Al = 13·75 | Al = 27·5 |
| Antimony (Stibium) | Sb = 122 | Sb = 122 |
| Arsenic | As = 75 | As = 75 |
| Barium | Ba = 68·5 | Ba = 137 |
| Bismuth | Bi = 210 | Bi = 210 |
| Boron | B = 11 | B = 11 |
| Bromine | Br = 80 | Br = 80 |
| Cadmium | Cd = 56 | Cd = 112 |
| Calcium | Ca = 20 | Ca = 40 |
| Carbon | C = 6 | C = 12 |
| Cerium | Ce = 46 | Ce = 92 |
| Chlorine | Cl = 35·5 | Cl = 35·5 |
| Chromium | Cr = 26·25 | Cr = 52·5 |
| Copper (Cuprum) | Cu = 31·75 | Cu = 63·5 |
| Gold (Aurum) | Au = 196·5 | Au = 196·5 |
| Hydrogen | H = 1 | H = 1 |
| Iodine | I = 127 | I = 127 |
| Iron (Ferrum) | Fe = 28 | Fe = 56 |
| Lead (Plumbum) | Pb = 103·5 | Pb = 207 |
| Lithium | L = 7 | L = 7 |
| Magnesium | Mg = 12 | Mg = 24 |
| Manganese | Mn = 27·5 | Mn = 55 |
| Mercury (Hydrargyrum) | Hg = 100 | Hg = 200 |
| Nitrogen | N = 14 | N = 14 |
| Oxygen | O = 8 | O = 16 |
| Phosphorus | P = 31 | P = 31 |
| Platinum | Pt = 98·5 | Pt = 197 |
| Potassium (Kalium) | K = 39 | K = 39 |
| Silver (Argentum) | Ag = 108 | Ag = 108 |
| Sodium (Natrium) | Na = 23 | Na = 23 |
| Sulphur | S = 16 | S = 32 |
| Tin (Stannum) | Sn = 59 | Sn = 118 |
| Zinc | Zn = 32·5 | Zn = 65 |

# MATERIA MEDICA,

WITH

# COMPOUNDS AND PREPARATIONS.

## ACACIÆ GUMMI.

### GUM ACACIA.

A gummy exudation from the stems of one or more undetermined species of Acacia, collected chiefly in Kordofan in Africa, and imported from Alexandria. In spheroidal tears, opaque from numerous cracks, nearly white.

Sp. g. 1·355. Contains about 17 per cent. of Water.

Solubility, 1 in 1 of Water. Insoluble in Alcohol, Ether, and Oils.

*Test.*—Powder of Gum should be white and free from Starch, and therefore, after boiling in Water and cooling, should not be rendered blue by an aqueous solution of Iodine.

### *Medicinal Properties.*

Emollient, nutritive. Allowed to dissolve slowly in the mouth, allays tickling cough. For a demulcent drink, 1 of Mucilage, 1 of Syrup, and 20 of Water, are the best proportions.

*Dose.—Ad libitum.*

### Preparation.

**MUCILAGO ACACIÆ.** Faintly coloured, slightly opaque.

Gum, 40; Distilled Water, 60: put these into a covered jar and stir frequently until the gum is dissolved. =(1 and 1½).

The product measures only 87, therefore 4 of Gum are contained in 8¾ measures of Mucilage. Sp. g. 1·170.

*Dose.*—1 to 4 drms.

(Fr. 1 and 1; Austr. Dan. Ger. and Russ. 1 and 2; Belg. 1 and 4—also M. Spissa 1 and 2—and M. Levis, 1 and 9; U.S. about 1 and 2.)

INCOMPATIBLES.—Alcohol and Sulphuric Acid; Borax, Persalts of Iron, and Subacetate of Lead render it gelatinous.

An excellent mode of preserving Mucilage from change in hot weather is to fill 6-ounce bottles with it as soon as made, and cork them.

Mucilage, if kept carelessly only a week in hot weather, becomes sour, and its emulsive property is impaired: if made with hot Water the change is more rapid.

It is much used in cough linctuses and lozenges, and frequently to render oils, &c., emulsive with aqueous fluids; 3 drms. are required for 1 oz. of oils or resinous tinctures, 10 drms. for 1 oz. of Copaiba. The Mucilage should be put into a mortar and the Oil added by degrees, with constant trituration. Used to keep Bismuth and other powders suspended, but Tragacanth answers better. It is sometimes used to make powders into pills, but they become hard after being kept a short time, therefore Castor-oil, Glycerine, Treacle, and even Confection of Roses, are to be preferred.

It is impossible to make a nice emulsion with some of the oils (the Oil of Male Fern for instance) unless the Mucilage be quite fresh; if fresh Mucilage is not at hand, half the quantity of the powder of Acacia can be used; first rub the powder with the Oil, then add Water equal to double the weight of the powder, and rub till an emulsion is formed: now add by degrees any quantity of aqueous liquid ordered in the prescription.

### Not Official.

Mixtura Gummosa (German).—Finely powdered Gum Arabic and White Sugar, of each 15; Water, 170.

Potion Gommeuse (Fr.).—Powdered Gum Arabic, 1; Sirop de Gomme, 3; Orange Flower Water, 1; Water, 10.

Sirop de Gomme (Fr.).—Gum, 10; Water, 15; Simple Syrup, 100 by weight; dissolve the Gum in cold Water, add the Syrup; and strain.

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## ACETUM.

VINEGAR.

An acid liquid of a brown colour and peculiar odour, prepared from malt and unmalted grain by the acetous fermentation; contains 4·6 per cent. of "anhydrous Acetic Acid," $C_4H_6O_3$, equal to 5·4 per cent. real Acid, $HC_2H_3O_2$.

*Test.*—Sp. g. 1·017 to 1·019. Ten minims of the Solution of Chloride of Barium (1 in 8) will precipitate all the Sulphuric Acid in an ounce of Vinegar, equal to $\frac{1}{1000}$ part, which by law is allowed to be added to it. 445·4 grains by weight (1 fluid ounce) require at least 402 grain-measures of volumetric solution of Soda for neutralization, corresponding to 4·6 per cent. of anhydrous Acetic Acid. Sulphuretted Hydrogen causes no change in colour—indicating absence of metals.

U.S. 1 fluid ounce is neutralized by 35 grs. of Bicarb. Potassium.

### *Medicinal Properties.*

Given to diminish profuse sweating in hectic cases. With Infusion of Sage it forms an astringent gargle. Used externally in lotions and fomentations. Used also to sponge the surface of the skin to allay heat, or with lint as a cooling discutient to bruises and sprains.

The most ready and safe antidote in cases of poisoning by alkalies.

*Dose.*—1 to 2 drms. diluted.

(Austr. 6 per cent. Acetic Acid; Fr. 9 p. c.; Belg. and Ger. 5·6 p. c.; Russ. 5 p. c.; U.S. 4·6 p. c.; Dan. 4·7 p. c.; all are without Sulphuric Acid.)

INCOMPATIBLES.—Ammonia, Lime, all the Alkalies, and Carbonates.
Used in making Empl. Cerat. Saponis.

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**ACETUM CANTHARIDIS.**—*See* CANTHARIS.
**ACETUM SCILLÆ.**—*See* SCILLA.

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# ACIDUM ACETICUM.

*The British Pharmacopœia orders only three strengths :—*

| | | "Anhydrous Acid." | Real Acid. |
|---|---|---|---|
| ACIDUM ACETICUM DILUTUM, | sp. g. 1·006, | cont. 3·63 per cent. | or 4·27 per cent. |
| ACIDUM ACETICUM . . . . | „ 1·044, | „ 28 „ | 33 „ |
| ACIDUM ACETICUM GLACIALE | „ 1·065, | „ 84 „ | 99 „ |

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## ACIDUM ACETICUM.

ACETIC ACID. PURIFIED PYROLIGNEOUS ACID.

A colourless acid liquid, with pungent odour, prepared from wood by destructive distillation and subsequent purification, containing 28 per cent. of "anhydrous Acid," $C_4H_6O_3$, or 33 per cent. of real Acid, $HC_2H_3O_2$.

*Test.*—Sp. g. 1·044. 182 grains by weight require for neutralization 1000 grain-measures of the volumetric solution of Soda. It leaves no residue when evaporated. If a fluid drachm of it mixed with half an ounce of Distilled Water and half a drachm of pure Hydrochloric Acid be put into a small flask with a few pieces of Granulated Zinc, and while the effervescence continues, a slip of bibulous paper wetted with Solution of Subacetate of Lead be suspended in the upper part of the flask above the liquid for about five minutes, the paper will not become discoloured—indicating absence of Sulphurous Acid; gives no precipitate with Sulphuretted Hydrogen, Chloride of Barium, or Nitrate of Silver—indicating absence of metals, Sulphuric and Hydrochloric Acids.

A mixture of equal volumes of this Acid and of Water is of the same neutralizing power as the diluted mineral acids of the Pharmacopœia, and is of the right strength for subcutaneous injection in cancer.

(U.S. 36 per cent. Acetic Acid; Dan. and Russ. 30 p. c.; (Acid. Acet. Dilut. Austr. 20·4 p. c. and Ger. 30 p. c.); Fr. Acid. Acétique du Bois sp. g. 1060; not in Belg.)

Used only in the preparation of other medicines, and contained in Acetum Cantharidis, Acidum Aceticum Dilutum, Extractum Colchici Aceticum, Linimentum Terebinthinæ Aceticum, Liquor Ammoniæ Acetatis, Liquor Epispasticus, and Oxymel.

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## ACIDUM ACETICUM DILUTUM.

DILUTED ACETIC ACID.

Colourless, and is of the same strength as Distilled Vinegar. Contains 3·63 per cent. of "anhydrous Acid."

Acetic Acid, 1; Distilled Water, 7; mix. =(1 in 8).

*Test.*—Sp. g. 1·006. 440 grains by weight (1 fluid ounce) require for neutralization 313 grain-measures of volumetric solution of Soda.

*Medicinal Properties.*

Used for the same purposes as common Vinegar; when more concentrated it is used for subcutaneous injection in cancer. (*See* ACIDUM ACETICUM.)

*Dose.*—1 to 2 drms. with Water.

(Austr. 20·4 per cent. Acetic Acid; Ger. 30 p. c.; Belg. 5·6 p. c.; Russ. 4 p. c.; see also Acetum.)

Used to prepare Acetum Scillæ and Liquor Morphiæ Acetatis.

## ACIDUM ACETICUM GLACIALE.

### GLACIAL ACETIC ACID.

Colourless, containing not less than 99 per cent. of Monohydrated or real Acetic Acid, $HC_2H_3O_2$, eq. 60; equal to 84 per cent. of "anhydrous Acid," $C_4H_6O_3$, eq. 102.

It dissolves Camphor, Gum-resins, Resins, and Volatile Oils.

*Test.*—Sp. g. 1·065 to 1·066, which is increased by adding 10 per cent. of Water if the Acid be of full strength. 60 grains by weight in an ounce of Water require for neutralization 990 grain-measures of the volumetric solution of Soda. Tried by the test mentioned in Acetic Acid, should indicate absence of Sulphurous Acid. When diluted gives no precipitate with Chloride of Barium or Nitrate of Silver—indicating the absence of Sulphuric and Hydrochloric Acids.

It is three times as strong as Acidum Aceticum, and nearly twenty-four times as strong as Acidum Aceticum Dilutum. It is a colourless liquid, with pungent acetous odour, is converted into a mass of crystals when cooled to 34° F., and remains crystallized at 48°.

*Medicinal Properties.*

Escharotic; used for corns and warts, especially when of a syphilitic character; it speedily vesicates, and thus is useful in cases where Cantharides may do harm by being absorbed; but it causes much pain, and if applied incautiously may produce a most troublesome sore. When scented, is employed to fill vinaigrettes containing sponge or fragments of Sulphate of Potash.

(Acid. Aceticum. Ger.; Acide Acétique Crystallisable sp. g. 1063 and Vinaigre Radical sp. g. 1075—1083 Fr.; A. A. Concentratum, Austr. 96 p. c., and Belg. sp. g. 1065, and Russ. 98 p. c.; not in Dan. or in U.S.)

It is an ingredient in Acetum Cantharidis and Mistura Creasoti.

### Not Official.

ACIDUM ACETICUM AROMATICUM (Belg. Russ. and Ger.).—Glacial Acetic Acid, 72 (Ger. 25); Oil of Cloves, 9; do. Lavender, 6; do. Orange, 6; do. Bergamot, 3; do. Thyme, 3; do. Cinnamon, 1; all by weight; mix and filter.

VINAIGRE ANGLAIS (Fr.).—Glacial Acetic Acid, 600; Camphor, 60; Oil of Cinnamon, 1; Oil of Cloves, 2; Oil of Lavender, ½; mix and digest fifteen days.

VINAIGRE DES QUATRE VOLEURS (Fr.).—Tops of the Greater and Lesser Wormwood, Rosemary, Sage, Peppermint, Rue, Lavender Flowers, of each 8; Calamus Root, Cinnamon, Cloves, Nutmeg, Garlic, of each 1; Camphor, 2; Glacial Acetic Acid, 8; Strong White Vinegar, 500; dissolve the Camphor and the Glacial Acid; macerate the other ingredients in the Vinegar for ten days; press and mix.

# ACIDUM ARSENIOSUM.

## ARSENIOUS ACID.

*Syn.*—White Arsenic, $As_2O_3$, eq. 198.

An anhydrous Acid. A heavy white powder, or in stratified opaque masses.

Solubility, 1 in 100 of cold Water; 1 in 20 of boiling Water.

*Test.*—Entirely volatilized at a temperature not exceeding 400° F.; sublimes in octahedral crystals. 4 grains of it, dissolved in boiling Water with 8 grains of Bicarbonate of Soda, discharge the colour of 808 grain-measures of the volumetric solution of Iodine; the Arsenite of Soda is converted into Arseniate, and the Iodine into Iodide of Sodium. An aqueous solution gives a canary-yellow precipitate with Ammonio-nitrate of silver, soluble in Ammonia, or Nitric Acid.

(U.S. Fr. and Belg. A. Arseniosum; Austr. Ger. Dan. and Russ. A. Arsenicosum.)

### *Medicinal Properties.*

Is a nerve tonic, and given in Eczema, in chronic cutaneous diseases, and in chronic rheumatism of the joints; it is an antiperiodic in agues and neuralgic affections. Best given immediately after meals. Externally as a powerful caustic, and requires great care, as there is danger of absorption.

*Dose.*—$\frac{1}{60}$ to $\frac{1}{12}$ of a grain, in solution; rarely prescribed in the solid form.

One of the symptoms of injurious effects from the continued use of Arsenic is œdema of the eyelids.

Incompatibles.—Salts of Iron, Magnesia, Lime Water, and astringent matters.

Antidotes.—In case of poisoning by Arsenic, the freshly prepared moist Peroxide of Iron, and Calcined Magnesia; Carron Oil, Stomach pump, Emetics, Ammonia, artificial respiration, cold affusion.

Antidotum Arsenici, Ph. Germ. (Dan. and Russ. similar). Calcined Magnesia 7, in 120 of Water; 60 of Solution of Persulphate of Iron, sp. g. 1·318, in 120 of Water.

These two mixtures will keep separately, and may be mixed at the instant they are required to be administered.

### Preparations.

**LIQUOR ARSENICALIS** (Fowleri). *Syn.* Liq. Potassæ Arsenitis. Pale Pink.

Arsenious Acid, 80 grs.; Carbonate of Potash, 80 grs.; Compound Tincture of Lavender, 5 fl. drms.; Distilled Water, 20 oz.: boil till dissolved, when cool add the tincture, and make up with Water to 20 oz. =(1 grain of Arsenic in 120 minims).

*Dose.*—2 to 8 minims twice or thrice a day in water with meals.

10 minims are used for each subcutaneous injection.

(Is of the same strength in U.S.—4 grs. of Arsenic to the fluid ounce; Fr. Belg. Dan. and Russ. 1 in 100; Austr. and Ger. 1 in 90.)

**LIQUOR ARSENICI HYDROCHLORICUS.** Colourless.

Arsenious Acid, 80 grs.; Hydrochloric Acid, 2 fl. drms.; Distilled Water, 20 oz.: boil the two Acids with 4 oz. of the Water until a solution is effected, then add sufficient Water to make up 20 oz.

Same strength as the Liquor Arsenicalis.

=(1 grain of Arsenic in 120 minims).

(Same as U.S.)

*Dose.*—2 to 8 minims.

**ARSENIAS FERRI.**—*Dose*, $\frac{1}{16}$ gr. *See* FERRI ARSENIAS.

**ARSENIAS SODÆ.**—*See* SODÆ ARSENIAS.

**ARSENIATIS SODÆ LIQUOR.** } *See* SODÆ ARSENIATIS
1 grain in 120 minims. *Dose*, 2 to 8 minims. } LIQUOR.

## Not Official.

**Liquor Ammoniæ Arsenitis** was preferred by the late Mr. Gaskoin, and made of the same strength as Liquor Arsenicalis; Carbonate of Ammonia being substituted for Carbonate of Potash.

The **Solutio Solventis Mineralis** of Dr. De Valangin (the Liquor Arsenici Chloridi of the London Pharmacopœia) contains 30 grains of Arsenic dissolved by 90 minims of Hydrochloric Acid in 20 ounces of Water; is about one-third of the strength of the British Pharmacopœia). *Dose.*—3 minims three times a day, increasing to 10 minims for chorea.

**Donovan's Solution** (the Liquor Arsenici et Hydrargyri Hydriodatis of the Dublin Pharmacopœia). A fluid drachm contains $\frac{1}{12}$th of a grain of Arsenic, $\frac{1}{4}$th of a grain of Mercury, $\frac{3}{4}$ths of a grain of Iodine. *Dose.*—10 to 30 minims.

**Arsenical Paste** for Dentists.—Arsenious Acid, 2; Sulphate of Morphia, 1; Creasote to make a stiff paste. A quantity of the size of a pin's head is ample for one application. It should be spread on cotton-wool and placed in the tooth. It will thus destroy the sensibility of a carious tooth, and in a few hours the tooth is ready for stopping.

**Arsenical Paste** (Frères Come's), for cancer, is applied after the surface has been laid bare by the application of caustic potash. Arsenic, 1; Charcoal, 1; Red Sulphuret of Mercury, 4; Water, *q. s.*

**Arsenical Caustic Powders** each contain from $\frac{1}{16}$ gr. to $\frac{1}{8}$ gr. of Arsenious Acid to 1 gr. of Calomel, Vermilion, or Sulphuret of Antimony, or of any combination of them.

**Iodide of Arsenic**, given in lepra. *Dose.*—$\frac{1}{30}$ of a grain in pill.

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# ACIDUM BENZOICUM.

## BENZOIC ACID.

*Syn.*—Flowers of Benzoin; Hydrate of Benzoyl.

$HC_7H_5O_2$, eq. 122.

In light feathery flexible crystalline silky plates and needles, nearly colourless, having an aromatic odour; obtained from Benzoin by sublimation.

Solubility, 1 in 400 of Water; 1 in 12 of boiling Water; 1 in 3 of Spirit. Soluble also in Caustic Alkalies and Lime. Borax aids its solubility in Water; 1 of Borax and 1 of Acid are soluble in 100 of Water; Phosphate of Soda aids its solution.

*Test.*—When heated it sublimes, leaving only a slight residue.

### *Medicinal Properties.*

Stimulant, expectorant; said to cure nocturnal incontinence of urine, given in 5 or 6 grain doses in pill or mixture or wrapped in wafer-paper, for inflammation of the bladder, frequently at first, afterwards at longer intervals and in diminished doses.

[1] *Stimulates the liver, but its action is less rapid and less powerful than that of its salts.*
—*Dr. Rutherford.*

*Dose.*—5 to 15 grs.: 5 grs. Acid and 1 min. Glycerine make a good pill.

Dr. Alexander Ure first pointed out that this Acid changed Uric into Hippuric Acid. A saturated solution in water delays decomposition of animal fluids.

Contained in Ammoniæ Benzoas, in Tinct. Camphoræ Composita, 2 grs. in each ounce; and in Tinct. Opii Ammoniata, 9 grs. in each ounce.

*See* BENZOINUM.

(In all the Pharmacopœias.)

### Not Official.

## ACIDUM BORACICUM.*

Is made by adding Sulphuric Acid to a strong Solution of Borax. In its usual state of white scaly crystals it is a hydrate.

Solubility, 1 in 30 of cold Water; 1 in 3 of boiling Water; 1 in 4 of Glycerine; 1 in 30 of Alcohol and burns with a characteristic green flame.

Lint dipped in a boiling saturated solution and dried, is used as an antiseptic dressing for wounds and ulcers; it does not irritate.

Equal to Benzoic Acid, but inferior to Salicylic Acid as an antiseptic.

Lotio Ophthalmic.—Boracic Acid, 2 grs., Water, 1 oz.; dissolve.

Unguentum Acidi Boracici.—Boracic Acid, 1; Yellow Wax, 1; Benzoated Lard, 6. Reduce the Boracic Acid to an impalpable powder, by occasionally adding a few drops of Rectified Spirit as the rubbing proceeds; lastly add the Wax and Lard, previously melted together, rubbing them to a smooth ointment. The ointment in the last edition (1 of Acid to 8 of Lard) was too soft for surgical use, it is now of proper consistence to spread, and when applied allows the discharge from a sore to escape; moreover, when removed, it comes off clean, leaving none adhering to the skin.

## ACIDUM CARBOLICUM.

### CARBOLIC ACID.

*Syn.*—Phenic Acid; Phenol; Hydrate of Phenyl Phenylic Alcohol.

• $HC_6H_5O$, eq. 94.

In colourless acicular crystals, which become pink by keeping, obtained from Coal Tar Oil by fractional distillation (boiling point 370°) and subsequent purification. Sp. g. 1·065. (Melts at 95° F., to an oily liquid. Brit. Ph.) It coagulates Albumen; does not redden Litmus; does not affect a ray of polarised light.

When 1, 2, or 3 parts of melted Carbolic Acid are mixed with 1 of Water, the Acid separates on cooling in oily-like globules; but when 4, 5, 6, 7, 8, and even 9 of Acid to 1 of Water are mixed, the solution is perfect at ordinary temperatures; when, however, the temperature sinks to 40° or under, the 8 and the 9 will crystallize out again.

The Phenol which melts at 95° F. contains Cresol which is an uncrystallizable body, and which is said to cause the purplish red colour in impure Carbolic Acid when exposed to light.

Cresol enters very largely into the composition of the cheaper kinds of liquid Carbolic Acid used as a disinfecting fluid. It is said to be scarcely inferior to Carbolic Acid as a disinfectant, but more irritating when applied in lotions as a dressing to wounds.

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* It was formerly called Homberg's Sedative Salt.

Therefore it is advisable to use, for making applications, only the pure Carbolic Acid, the melting point of which is 105° to 108° F.

Pure Carbolic Acid is supplied in three states—Glacial, Granular, Liquid—the last being made by mixing 9 of acid with 1 of water, and the following methods have been employed for testing this liquid:—

100 c. c. are put into a retort and distilled; the first 30 c. c. of the distillate are rejected, and the next 30 c. c. are examined for the melting point, which should not be lower than 104° F.

When a small quantity of this solution—say 2 fluid drachms, in a test tube clean and dry, and a thermometer dipping into the solution —are placed in cold water about the temperature of 45° F., and gently stirred, it becomes a mass of crystals, and it again becomes a clear solution when the temperature rises to 55° or 56° F.

Solubility, 1 in 15 of Water, and will not separate when more Water is added; 1 in 1¾ of Olive Oil; 4 in 1 of Glycerine; 3 in 1 of Chloroform; 4 in 1 of Ether; 5 in 1 of Alcohol; and in Volatile Oils.

Solution of Chloride of Lime takes away the odour.

### *Medicinal Properties.*

Given to check sickness, to arrest diarrhœa, to remove intestinal worms; useful in some stages of phthisis; for psoriasis 3 grs. in water three times a day are taken, and itching greatly relieved. It has been used with advantage in hooping cough internally as well as by inhalation, also as a disinfectant, sprinkled about the room. It produces profuse perspiration, lowers the pulse, and is thus useful in fever, scarlatina, measles, and small-pox. It is not indicated in typhus. Used as a gargle (2 grs. to 1 oz.) for sore throat attended with fœtor of breath; if used with a spray apparatus, 20 grains in an ounce of Water; or for inhalations, 15 grs. dissolved in a pint of hot Water; as an injection (1 gr. to 4 oz. of Water) for the vagina or the bladder, to correct putrescence. Externally, used alone is a powerful caustic; as a lotion (15 to 30 grs. to 1 oz.) for foul or syphilitic ulcers, carbuncles, scabies, and lepra; (5 grs. to 1 oz.) excellent for eczema and eruptions attended with itching; or an ointment (30 grs. to 60 grs. to 1 oz. of Benzoated Lard).

1 of Acid in 20 of Water or Olive Oil, for dressing lacerated wounds, scalds, and burns. Mr. Lister prefers water; he uses 1 in 40 of Water to dip his fingers in to preserve him from injury when handling infectious sores.

¾ gr. of Crystallized Acid dissolved in 20 drops of Water for hypodermic injection.

(Austr. Dan. Ger. U.S. and Russ.; Fr. Acide Phénique; not in Belg.)

*Dose.*—1 to 3 grains in water or in pill twice or three times a day.

ANTIDOTES.—Stomach-pump, Emetics. Diluted Sulphuric Acid, Albumen, Saccharated Solution of Lime; Olive or Castor Oil, strong Tea or Coffee, to counteract narcotism.

## Preparations.

**GLYCERINUM ACIDI CARBOLICI.** Colourless.

Carbolic Acid, 1; Glycerine, 4: rub together till dissolved. (By weight 1 in 6, by measure 1 in $4\frac{3}{4}$).

*Dose.*—5 to 10 minims in water.
(U.S., 1 troy ounce and 4 fluid ounces.)

Mixed with an equal bulk of water, may be applied to the tonsils when turgid, or when there is a diseased state of mucous surface producing fœtor of breath; also in diphtheria, assisted by a nutritious diet.

**SUPPOSITORIA ACIDI CARBOLICI CUM SAPONE.**

Carbolic Acid, 12 grs.; Curd Soap in powder, 180 grs.; Starch, sufficient to form a paste; to be divided into 12 conical suppositories.

The mass is too hard *without* any Starch.

[If, instead of Starch, Glycerine of Starch 40 grs. is used, a proper mass is formed.—Edit.]

Suppositoria, u.s.: Carbolic Acid, 12 grs.; Theobroma Oil, 348 grs.; Water sufficient; divide into 12.

## Not Official.

Aqua, u.s.: Glycerite of Carbolic Acid, 10 fluid drachms; Water to 16 ounces.

Camphor Phénique is an oily liquid, obtained by dissolving Powdered Camphor in Crystallized Carbolic Acid dissolved in a small quantity of Alcohol (9 Acid to 1 Alcohol). 25 grammes Camphor in powder make 35 grammes Camphor Phênique.

This liquid is miscible in all proportions with Alcohol, Ether, and Oil of Almonds.

It is applied to false membranes in diphtheria, either pure or mixed with an equal volume of Oil of Almonds.

It may be used at first every two hours, and afterwards three or four times a day. —*Bulletin de Thérapeutique.*

Lotio Acidi Carbolici. Carbolic Acid, 30 grs.; Water, 8 oz. This lotion applied to mosquito bites relieves the itching, pain, and swelling. If mixed with a little Glycerine and sponged over the face and hands before retiring to rest, the mosquitoes will not bite until the Acid be thoroughly evaporated by the heat of the skin.—*Lancet*, Aug. 24, 1878.

Carbolic Acid Putty is made by first mixing 1 of Acid with 4 of boiled Linseed Oil, and adding Chalk till of the consistence of Putty.

Unguentum Acidi Carbolic, u.s.: Carbolic Acid, 1; Ointment, 7. (Made of 4 pts. of Lard and 1 of Yellow Wax.)

Emplastrum Acidi Carbolici.—Take of Shellac 75, Carbolic Acid 25: melt the Shellac with 8 of the Acid first, then add the remaining 17 of Acid, and mix thoroughly. Should be spread on linen about $\frac{1}{16}$th of an inch thick, and then coated over with a solution of Gutta Percha in Bisulphide of Carbon, to keep the Acid from escaping. The plaster is applied to all sores to lessen the discharge, strapping-plaster being used to keep it in its place.—*University College.*

Oiled Silk dipped in a solution of Carbolic Acid, 1 in 40, is sometimes placed between the wound and the above plaster when it is found too stimulating. Gauze imbued with Carbolic Acid is also used to lay over the sores to prevent any putrid effluvia arising, as well as to protect the sores from atmospheric influence.

Catgut ligatures are kept in Carbolized Oil for surgical use.

Carbolate of Lime has been used with success in the last stages of diarrhœa. *Dose.*—2 grains in a pill. 10 grains with Stearine, for an antiseptic pessary.

The SULPHOCARBOLATES have been given in zymotic diseases with benefit.

SULPHOCARBOLIC ACID is formed by the action of Sulphuric Acid upon Carbolic Acid. (Gmelin's "Chemistry," vol. xii. 1857. See also *Medical Press and Circular*, May 25, 1870.)

SULPHOCARBOLATES OF AMMONIA, of MAGNESIA, of POTASH, and of SODA, all crystallize in tufts of acicular crystals more or less white; SULPHOCARBOLATE OF COPPER, in transparent light blue interlacing prisms; of IRON, in small brown micaceous crystals; of ZINC, in transparent rectangular colourless plates.
60 grs. of Sulphocarbolate of Zinc to 24 oz. of Water for vaginal injection,—for leucorrhœa or gonorrhœa.

MISTURA SODÆ SULPHOCARBOLATIS.—Sulphocarbolate of Soda, 20 grs.; Camphor Water to 1 oz. for a dose.— *Chest Hospital.*

MISTURA SODÆ SULPHOCARBOLATIS ET CINCHONÆ.—Sulphocarbolate of Soda, 20 grs.; Liquid Extract of Bark, 10 mins.; Water to 1 oz.—*Chest Hospital.*

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**Not Official.**

## ACIDUM CHROMICUM:

Is obtained by adding strong Sulphuric Acid to Bichromate of Potassium; it occurs in crimson-red needles or quadrangular prisms, and is very deliquescent. Should be free from Sulphuric Acid and Arsenic. Solubility, 2 in 1 of Water; Alcohol decomposes it.

It is a powerful caustic (1 in 1 of Water), and is used in the French hospitals by means of a glass rod, great care being taken to protect the adjacent parts by plaster or ointment, having moist lint ready to absorb any superfluous Acid; it removes warty excrescences; 1 in 8 of Water may be applied to indolent ulcers, and 1 in 2000 or even 4000 is used to wash putrid sores, cancers, &c., so powerful are its antiseptic properties.
A warm concentrated solution rapidly dissolves all animal tissues.

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**Not Official.**

## ACIDUM CHRYSOPHANICUM.

Is a pale yellow powder, or in yellow needles and plates, inodorous, and almost tasteless. It is said to be an oxidised product from Chrysarobin, which exists in Araroba powder to the extent of over 80 per cent., and which can be extracted by Benzol.

Soluble in Benzol, in Chloroform, and 1 in 224 of boiling Alcohol; nearly insoluble in cold, or in boiling water.
An ointment made by heating over a water-bath 15 to 60 grs. in 1 oz. of Lard and stirring till cold is found efficient in chronic psoriasis, but it requires watching. It has the disadvantage of staining the skin yellow.

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# ACIDUM CITRICUM.

### CITRIC ACID.

$H_3C_6H_5O_7.H_2O$, eq. 210.

A crystalline acid obtained from Lemon Juice, or from the Juice of the fruit of *Citrus Limetta*, the Lime.
In colourless right rhombic prisms.
Solubility, 10 in 6 of Water; 1 in 2 of Glycerine; 10 in 15 of Rectified Spirit.

*Test.*—70 grains dissolved in Water require for neutralization 1000 grain-measures of volumetric solution of Soda; 100 grains dissolved in Water require for neutralization 150 grains of Bicarbonate of Potash. It leaves no ash when burnt with free access of air. Dissolved in Water, it is not darkened by Sulphuretted Hydrogen, and gives no precipitate when dropped into cold solution of Lime, or when added in excess to a solution of Acetate of Potash, or Chloride of Barium—indicating absence of metals, Oxalic, Tartaric, and Sulphuric Acids.

Acid, 1, dissolved in Distilled Water, 14, is a substitute for Lemon Juice, but does not keep long without spoiling.

| | | | |
|---|---|---|---|
| 17 grs. of Citric Acid, or half a fluid ounce of fresh Lemon Juice | neutralize about or nearly | 24¼ grs. | Bicarbonate of Potash. |
| | | 20 ,, | Carbonate of Potash. |
| | | 20½ ,, | Bicarbonate of Soda. |
| | | 34¾ ,, | Carbonate of Soda. |
| | | 14¼ ,, | Carbonate of Ammonia. |
| | | 11¾ ,, | Carbonate of Magnesia. |

*Medicinal Properties.*

Refrigerant; allays thirst and irritation of the skin.

Prescribed in powders to be taken with each dose of an alkaline mixture during effervescence; or in solution, directing the quantity to be taken with the alkaline mixture.

*Dose.*—10 to 30 grs. in a wineglassful of Water.
(Austr., Belg., Dan., Fr., Ger., Russ., U.S.)

INCOMPATIBLES.—Tartrate of Potash, Alkaline Carbonates, Acetates, and Sulphurets.

Contained in Ammoniæ Citratis Liquor, Bismuthi et Ammoniæ Citratis Liquor, Ferri et Ammoniæ Citras, Ferri et Quiniæ Citras, Lithiæ Citras, Potassæ Citras, Sodæ Citro-Tartras Effervescens, Vin. Quiniæ, and in all the granular effervescing Citrates.

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## ACIDUM GALLICUM.

### GALLIC ACID.

$H_3C_7H_3O_5.H_2O$, eq. 188.

Crystalline in acicular prisms or silky needles generally of a pale fawn colour. Prepared from Galls.

Solubility, 1 in 100 of cold Water; 1 in 3 of boiling Water; 1 in 8 of Rectified Spirit; 1 in 20 of Glycerine, or with heat, 1 in 5.

A solution in Rectified Spirit would be a convenient form for keeping it, as it will mix in any proportion with Water without separating; but it becomes brown by keeping.

*Test.*—It leaves no residue when burnt with free access of air; its solution reddens Litmus, gives no precipitate with Gelatine, nor does it colour the Protosalts of Iron—indicating absence of earthy matters and of Tannic Acid.

Care must be taken that the Protosalt of Iron is entirely free from Persalt, for the latter gives a bluish-black precipitate. The Crystalline Acid, when dried at 212°, loses 9·5 per cent. of its weight.

*Medicinal Properties.*

Astringent; given in all cases where the bleeding vessels must be reached through the circulation; it is considered by some to be more effective than Tannic Acid. It is given in pyrosis and the night sweats of phthisis, and is very effective in albuminuria.

*Dose.*—3 to 10 grs., with twice its weight of Sugar, to be taken three times a day in Water, in powders, or may be folded in wafer-paper; 10 to 60 grs. every five hours in albuminuria, when the urine is of low specific gravity. It is also given in pills: 30 grs. of Acid and 3 minims of Glycerine will make 6 pills.

(Fr. and U.S.; not in the others.)

INCOMPATIBLES.—Spiritus Ætheris Nitrosi, Metallic Salts.

### Preparation.

**GLYCERINUM ACIDI GALLICI.** Yellow.

Gallic Acid, 1; Glycerine, 4; rub together and dissolve by a gentle heat. Part separates after cooling, and remains undissolved.

(By weight 1 in 6, by measure 1 in 4½).

*Dose.*—10 to 60 minims.

(U.S. 1 troy oz. and 4 fl. oz.; not in others.)

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## ACIDUM HYDROCHLORICUM.

### HYDROCHLORIC ACID.

*Syn.* ACIDUM MURIATICUM PURUM; CHLORHYDRIC ACID; SPIRIT OF SALT.

Colourless. Contains 31·8 per cent. by weight of Hydrochloric Acid gas, $HCl$, eq. 36·5.

*Test.*—Sp. g. 1·160. 114·8 grains by weight, diluted with ½ oz. of Distilled Water, require for neutralization 1000 grain-measures of volumetric solution of Soda. It gives with Nitrate of Silver a curdy white precipitate soluble in excess of Ammonia, but insoluble in Nitric Acid. When diluted with four times its volume of Distilled Water, it gives no precipitate with Chloride of Barium, is not discoloured by Sulphuretted Hydrogen, and does not tarnish bright copper-foil when boiled with it—indicating absence of Sulphuric Acid, metals, and Arsenic. Should leave no residue on evaporation.

For the tests of Sulphurous Acid, *see* ACID. ACETIC. page 3.

*Medicinal Properties.*

Given in a very diluted form, as a refrigerant, antiseptic, and tonic; applied with an equal quantity of Water to diphtheric patches in the throat.

(Same as U.S.; Fr. sp. g. 1·170; Belg. sp. g. 1·180; Dan. Ger. and Russ. sp. g. 1·124; Austr. sp. g. 1·120.)

INCOMPATIBLES.—Salts of Silver and Lead, Tartar Emetic, Alkalies, and their Carbonates.

ANTIDOTES.—In cases of poisoning by Hydrochloric Acid, the antidotes are Chalk, Magnesia, with White of Egg, Carron Oil, or Soap-suds, followed by Enemata of

Beef Tea and Brandy, with Tinct. of Opium to prevent collapse; and Emollient Drinks.

### Preparation.

**ACIDUM HYDROCHLORICUM DILUTUM.** Colourless.

Acid, 8; Distilled Water sufficient to make the mixture, when cooled to 60°, measure 26½; or 3060 grains by weight of Acid, and Distilled Water sufficient to measure 20 ozs. when cooled to 60° F.

Contains 10·58 per cent. of Acid Gas.

*Test.*—Sp. g. 1·052. Six fluid drachms (345 grains by weight) require for neutralization 1000 grain-measures of volumetric solution of Soda, indicating 1 equivalent in grains (36½) of Hydrochloric Acid, HCl.

Three and a third minims contain about 1 minim strong Acid.

*Dose.*—10 to 30 minims with bitter infusions; for children, 1½ to 2 mins.; 1 drm. in 8 oz. of Infusion of Roses as a gargle for ulcerated sore throat and thrush.

(Belg. sp. g. 1·030; U.S. and Russ. sp. g. 1·038; Dan. sp. g. 1·048; Austr. and Ger. sp. g. 1·060; not in Fr.)

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## ACIDUM HYDROCYANICUM DILUTUM.

### DILUTED HYDROCYANIC ACID.

*Syn.* Prussic Acid; Cyanhydric Acid.

Hydrocyanic Acid, **HCN**, eq. 27, dissolved in Water, and constituting 2 per cent. by weight of the solution. Colourless; with a powerful odour.

*Test.*—Sp. g. ·997. 270 grains by weight of the Acid, rendered alkaline by the addition of solution of Soda, require the addition of 1000 grain-measures of the volumetric solution of Nitrate of Silver before a permanent precipitate begins to form, which corresponds to 2 per cent. of real Acid. This test is that of Liebig. The addition of the Soda to the Prussic Acid produces Cyanide of Sodium, and this again becomes Cyanide of Silver when the Nitrate of Silver is dropped in; but as one equivalent of Cyanide of Silver combines with one equivalent of Cyanide of Sodium to form a soluble compound, it is only when exactly one-half of the Cyanide of Sodium has been converted into Cyanide of Silver that a permanent precipitate is produced.

It only slightly and transiently reddens Litmus. Treated with a minute quantity of a mixed solution of Sulphate and Persulphate of Iron, afterwards with Potash, and finally acidulated with Hydrochloric Acid, it forms Prussian Blue.

It gives no precipitate with Chloride of Barium, but with Nitrate of Silver it gives a white precipitate entirely soluble in boiling concentrated Nitric Acid—indicating absence of Sulphuric and Hydrochloric Acids.

### *Medicinal Properties.*

As this Acid is a dangerous poison, it should never be prescribed alone.

The vapour is sometimes applied to the eye.

It is sedative, antispasmodic, allays vomiting, is useful in gastrodynia, and in dyspeptic palpitations. Used externally to allay itching of the skin; as a lotion 2 drms. to 8 oz. of Rose Water; as an ointment from ½ drm. to 1 drm. to each ounce of Zinc Ointment.

Prescribed in Almond Emulsion for cough, and with Bicarbonate of Soda and Peppermint Water for dyspepsia.

*Dose.*—2 to 8 minims.

(Same as Russ. and U.S. 2 per cent.; Belg. 2·5 per cent.; Fr. Acide Prussique Médicinal 10 per cent.; not in Austr. Dan. or Ger.)

INCOMPATIBLES.—Salts of Silver, Copper, Iron, Red Oxide of Mercury, Sulphurets.

ANTIDOTES.—In cases of poisoning, the antidotes are fresh air and artificial respiration, with cold affusion; freshly precipitated Oxide of Iron, with an Alkaline Carbonate, thus, 10 grs. of Sulphate of Iron, with a drachm of Tinct. of Iron and 1 oz. of Water, followed by 20 grs. of Carbonate of Potash dissolved in 1 oz. of Water. This will render insoluble 110 minims of Br. Ph. Acid.

### Preparation.

**VAPOR ACIDI HYDROCYANICI.**

Diluted Hydrocyanic Acid, 10 to 15 minims; cold Water, 60 minims; mix in a suitable apparatus, and let the vapour that arises be inhaled.

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### Not Official.

## ACIDUM LACTICUM, U.S.

A syrupy liquid, of a pale wine colour, and very sour taste. Sp. g. 1·212. It unites in all proportions with Water, Alcohol, and Ether.

It has been used as a spray in diphtheria, 1 part to 8 or 16 parts of Water.

(Ger. and Russ. sp. g. 1·240; Fr. sp. g. 1·315; Belg. sp. g. not given.)

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# ACIDUM NITRICUM.

## NITRIC ACID.

*Syn.* AZOTIC ACID.

Colourless. Contains 60 per cent. by weight of "anhydrous Acid," $N_2O_5$, eq. 108, or 70 per cent. by weight of real Acid, $HNO_3$, eq. 63.

*Test.*—Sp. g. 1·420. Boiling Point 250° F. 90 grains by weight, mixed with half an ounce of Distilled Water, require for neutralization 1000 grain-measures of the volumetric solution of Soda. Evaporated, it leaves no residue. If it be poured upon copper filings, dense red fumes are formed. Diluted with six volumes of Distilled Water, it gives no precipitate with Chloride of Barium or Nitrate of Silver—indicating absence of Sulphuric and Hydrochloric Acids.

5 measures of Acid, sp. g. 1·500, and 2 of Water mixed, condense into 6½ measures, and make the sp. g. 1·420.

### *Medicinal Properties.*

It is strongly corrosive, and is applied as a caustic to phagedenic sores and chancres by means of a pointed glass rod. When diluted it is refrigerant, tonic, and antiseptic; and if very much diluted forms a drink in febrile diseases, especially typhus, and is used also as an injection in phosphatic calculus.

(Same as Fr. and U.S.; Dan. sp. g. 1·180; Russ. sp. g. 1·200; Ger. sp. g. 1·185; Belg. sp. g. 1·380; Austr. sp. g. 1·300.)

INCOMPATIBLES.—Alcohol, Alkalies, Oxides, Sulphate of Iron, Acetate of Lead, all Carbonates and Sulphurets.

ANTIDOTES.—In case of poisoning by Nitric Acid, the antidotes are Chalk, Magnesia, with White of Egg, Carron Oil, or Soap-suds, followed by Enemata of Beef Tea and Brandy, with Tinct. of Opium to prevent collapse; emollient drinks.

### Preparation.

**ACIDUM NITRICUM DILUTUM.** Colourless.

Nitric Acid, 6; Distilled Water sufficient to make the mixture, when cooled to 60° F., measure 31; or 2400 grains by weight of Acid, and Distilled Water sufficient to measure 20 ozs. when cooled to 60° F. Contains 14·95 per cent. of "anhydrous Acid."

*Test.*—Sp. g. 1·101. Six fluid drachms (361·3 grains by weight) require for neutralization 1000 grain-measures of volumetric solution of Soda, indicating half an equivalent in grains (54) of "anhydrous Acid."

*Dose.*—10 to 30 minims. For Children 1½ min.

5 minims contain about 1 minim of strong Acid.

Prescribed with bitter infusions and Tincture of Orange. Infusion of Roses made with this Acid, instead of Sulphuric Acid, and sweetened, is the most elegant form for administering Quinia with this astringent. Sulphuric Acid, by precipitating the Tannate of Quinia, makes a turbid mixture (*Pharm. Journ.*, vol. i. p. 585).

(Russ. sp. g. 1·096; U.S. sp. g. 1·068; Belg. sp. g. 1·120; Austr. sp. g. 1·130; Ger. sp. g. 1·086-9; not in Fr.)

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## ACIDUM NITROHYDROCHLORICUM DILUTUM.

### DILUTED NITRO-HYDROCHLORIC ACID.

Nitric Acid, 3; Hydrochloric Acid, 4; Water, 25. Mix the Acids and allow them to remain for twenty-four hours in a bottle the mouth of which is partially closed, then add the water in successive portions, shaking the bottle after each addition. Colourless.

The two Acids are very properly ordered to be mixed together twenty-four hours, to develope the Chlorine before the Water is added.

*Test.*—Sp. g. 1·070. 6 fluid drachms (352 grains by weight) require for neutralization about 900 grain-measures of the volumetric solution of Soda.

16 minims contain 1½ minim of Nitric Acid and 2 minims of Hydrochloric Acid.

### *Medicinal Properties.*

Tonic, stomachic, alterative. Externally as a lotion or bath, for obstructions of the liver.

*Is an hepatic stimulant of considerable power.—Dr. Rutherford.*

*Dose.*—5 to 20 minims in 1½ oz. Water, and for children 1 min. with Succus Taraxaci, or Tinct. Aurantii.

(U.S. orders the undiluted—Nitric Acid 3, Muriatic Acid 5, also the diluted —Nitric Acid 1¼ oz., Hydrochloric Acid 2 ozs., both by troy weight, Water sufficient to make up the measure to 16 ozs. The Acids are not diluted in Fr. Belg. Ger. and Russ.—Nitric Acid 1, Hydrochloric Acid 3. Not in Austr. or Dan.)

ANTIDOTE.—Albumen freely administered, after evacuating the stomach.

### *Directions for Preparing and Using the Bath.*

Mix 8 ounces by measure of this Acid with 1 gallon of pure Water, temperature 96° or 98° F. Let a flannel roller* of ten or twelve inches wide, and sufficient to encircle the body twice, be soaked in the fluid and then wrung, so as to remain only damp. Apply this instantly to the body, covering it with a piece of oiled silk to avoid damping the dress. It should be worn constantly, but should be changed, soaked, and wrung, morning and evening. Glass, glazed earthenware, or wooden vessels should be used. Sponges and towels to be kept in Water to prevent them corroding.

Aqua Regia consists of the strong Acids—1 Nitric, 2 Hydrochloric, mixed.

## ACIDUM PHOSPHORICUM DILUTUM.

DILUTED PHOSPHORIC ACID.

$H_3PO_4$, eq. 98, dissolved in Water.

Colourless. Contains 10 per cent. by weight of "anhydrous Acid," $P_2O_5$, eq. 142.

*Test.*—Sp. g. 1·080. 6 fluid drachms (355 grains by weight) poured upon 180 grains of Oxide of Lead (Litharge) in fine powder, leave, after evaporation, a residue which, heated to redness, weighs 215·5 grains, and is principally Phosphate of Lead, indicating a quarter of an equivalent in grains (35·5) of "anhydrous Phosphoric Acid." With Ammonio-nitrate of Silver it gives a canary-yellow precipitate, soluble in Ammonia and in Diluted Nitric Acid, as is the case with aqueous solution of Arsenious Acid. Evaporated, it leaves a residue which melts at a low red heat, and upon cooling exhibits a glassy appearance. It is not precipitated by Sulphuretted Hydrogen, Chloride of Barium, Nitrate of Silver acidulated with Nitric Acid, or by a solution of Albumen—indicating absence of metals, Sulphuric Acid, Hydrochloric Acid, and Metaphosphoric Acid. When mixed with an equal volume of pure Sulphuric Acid, and then introduced into solution of Sulphate of Iron, it does not communicate to it a dark colour—indicating absence of Nitric Acid.

### *Medicinal Properties.*

Tonic and refrigerant, having properties similar to Sulphuric Acid, but more palatable, and has the property of allaying a tickling cough ;

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* These, with the oiled silk attached, can be had of the chemists ready made.

it is said to correct the phosphates in the urine, and to allay thirst in diabetes. Given with Phosphate of Lime in rickets. It is also found useful in cases of vomiting and diarrhœa, arising from a bilious attack, if given in frequent doses.

*Dose.*—10 to 30 minims largely diluted with Water; for children 1 to 2 mins.

(Dan. sp. g. 1·080; U.S. sp. g. 1·056; Russ. sp. g. 1·062; the following are *not* called Dilutum—Fr. sp. g. 1·450; Belg. sp. g. 1·350; Ger. sp. g. 1·120; Austr. sp. g. 1·117; Russ. sp. g. 1·130.)

INCOMPATIBLES.—Lime Water, Calcareous Salts, Carbonate of Soda.

May be prescribed with some bitter and aromatic tinctures and syrups, or with Syrup of the Phosphate of Iron, but not with the Syrup of Pyrophosphate of Iron, as the mixture becomes solid.

Used to prepare Syrupus Ferri Phosphatis and several non-official formulas.

### Not Official.

ACIDUM PHOSPHORICUM GLACIALE. METAPHOSPHORIC ACID. $HPO_3$. Colourless, transparent, glass-like masses, which absorb moisture from the air, and slowly become converted into Orthophosphoric Acid.

Soluble in water; the solution coagulates albumen and gives a white precipitate with a salt of Barium.

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### Not Official.

## ACIDUM PYROGALLICUM.

PYROGALLIC ACID is in white flaky crystals, which blacken by exposure to light. Solubility, 1 in 2 of Water, and measures 2½; 9 in 10 of Rectified Spirit. Chiefly used in photography.

1 in 16 of Water is used with a solution of Nitrate of Silver 1 in 30 of Water, for blackening the hair.

*British Medical Journal*, Feb. 22, 1879, says a solution in Water of 2 per cent. acts as an antiseptic.

Pyrogallic Acid used in the form of a 10 per cent. salve, and applied with a brush twice a day, proved very useful in Hebra's wards in the treatment of psoriasis. The parts were then covered with cotton wadding or linen, and when very extensive were covered with flannel. (*Practitioner*, Nov., 1880.)

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### Not Official.

## ACIDUM SALICYLICUM.

SALICYLIC ACID, in shining white needles, prepared by passing Carbonic Acid into a mixture of Carbolic Acid and Caustic Soda at a high temperature, and decomposing the Salicylate of Soda with an Acid; or by treating Oil of Winter Green, which is mainly composed of Salicylate of Methyl, with a solution of Caustic Potash, and distilling it, decomposing the residue with Hydrochloric Acid, and purifying the Salicylic Acid by recrystallization. (Mr. Williams.)

The natural acid is preferable to the artificial for internal use.

Solubility, 1 in 760 of cold Water; 1 in 9 of boiling Water; 1 in 15 of Proof Spirit; 1 in 3½ of Rectified Spirit; 1 in 120 of Olive Oil; 1 in 195 of Glycerine; 1 in 8 of Lard (at 180° F.). 20 grains Salicylic Acid are rendered soluble in a fluid ounce of Water by the addition of 20 grains of Acetate of Potash, or 25 grains of Borax, or 40 grains of Citrate of Potash.

*Tests.*—An aqueous solution of Salicylic Acid gives a deep violet colouration with Persalts of Iron. Dissolve 1 of the Acid in 10 of Rectified Spirit, and leave it to evaporate in a watchglass in the ordinary temperature of the air. It forms round the edge of the watchglass a ring of beautiful efflorescent aggregated crystals. This mass is *pure white* if the Acid used be quite pure and has been recrystallized, but yellowish if simply the precipitated Acid be used.

### *Medicinal Properties.*

Antiseptic; useful in acute rheumatism. (*Lancet*, April and May, 1876.)

Professor German Sée considers that the doses should be spread over pretty equal intervals of the day; that it is dangerous given in the solid form. He prefers the Salicylate of Soda, about 460 grains dissolved in 10 ounces of water, ½ ounce diluted with water four times a day until pain diminishes; then only three times a day for about a week or so, then only 1 ounce (in four doses) during the day, taken at meals, and if it causes sickness a little brandy may be added.

Dr. Maclagan (*Lancet*, June, 1879) prefers Salicin to Salicylic Acid; considers it equally good in acute rheumatism, its action being tonic, whilst the Salicylic Acid is depressing, and sometimes alarmingly so. He gives 20 to 30 grs. of Salicin every hour at first, then every two, three, or four hours as the symptoms decline.

Unguentum Acidi Salicylic.—Salicylic Acid, 30 grs.; Benzoated Lard, 1 oz.; melt over a water-bath and stir till cold.—*British Skin Hospital.*

Used for eczema, psoriasis, ringworm, and for foul ulcers. Similar in action to Chrysophanic Acid.

# ACIDUM SULPHURICUM.

## SULPHURIC ACID.

A colourless oily liquid; boils at 620° F.; contains 96·8 per cent. by weight of real Sulphuric Acid, $H_2SO_4$, eq. 98; and corresponds to 79 per cent. by weight "anhydrous Acid," $SO_3$, eq. 80.

*Test.*—Sp. g. 1·843.* 50·6 grains by weight, mixed with an ounce of Distilled Water, require for neutralization 1000 grain-measures of volumetric solution of Soda. It evolves much heat on the addition of water, and when thus diluted gives a copious precipitate with Chloride of Barium. Evaporated in a platinum crucible, leaves little or no residue; diluted with six times its volume of Distilled Water, it gives no precipitate with Sulphuretted Hydrogen; when a solution of Sulphate of Iron is poured upon it, no purple ring is formed at the junction of the two solutions—indicating absence of fixed impurities, Arsenic, and Nitric Acid. Sulphate of Lead if present falls in a white precipitate by dilution merely.

### *Medicinal Properties.*

A powerful caustic, and when so used it is made into a paste with an equal quantity of charcoal; when diluted it is tonic, refrigerant, astringent, exciting the appetite and promoting digestion; it diminishes night sweating.

(In all the Pharmacopœias, ranging from sp. g. 1·840 to 1·847.)

Incompatibles.—Alkalies and their Carbonates, Salts of Lead and Lime.

Antidotes.—In case of poisoning by Sulphuric Acid, Magnesia is preferred to Chalk. For other antidotes see Hydrochloric and Nitric Acids.

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* True Monohydrated Sulphuric Acid has a sp. g. 1·848.

Sulphuric Acid exists in two other states: a solid crystalline form, resembling Asbestos, which is used in the arts; and Nordhausen Acid, a fuming liquid, which has been employed for the cure of cancer.

### Preparations.

**ACIDUM SULPHURICUM AROMATICUM.** Elixir of Vitriol. Intense red.

Contains 10·91 per cent. of "anhydrous Acid."

Sulphuric Acid, 3; Rectified Spirit, 40; Cinnamon in powder, 2; Ginger in powder, 1½; mix the acid gradually with the spirit, add the powders, and macerate for seven days, and filter.

*Test.*—Sp. g. 0·927. Six fluid drachms (304·2 grains by weight) require for neutralization 830 grain-measures of the volumetric solution of Soda, containing therefore 33·2 grains of "anhydrous Acid."

*Dose.*—5 to 30 minims. Best prescribed alone, to be taken in Water.

(U.S. Sulphuric Acid, 6 troy oz.; Ginger, 1 troy oz.; Cinnamon, 1½ troy oz.; add the Acid gradually to 16 fl. oz. of Alcohol (·835); percolate the Ginger and Cinnamon with fresh Alcohol until 16 fl. oz. are obtained, and mix the two solutions; Belg. Ac. Sulph. Alcoholisatum, Acid 1, Alcohol 3; not in others.)

**ACIDUM SULPHURICUM DILUTUM.** Colourless.

Contains 11·14 per cent. of "anhydrous Acid."

Sulphuric Acid, 7; mix gradually Distilled Water, sufficient to measure 83¼ when cooled to 60° F.; or 1350 grains by weight of Acid, and Distilled Water sufficient to measure 20 oz. when cooled to 60° F.

*Test.*—Sp. g. 1·094. 6 fluid drachms (359 grains by weight) require for neutralization 1000 grain-measures of the volumetric solution of Soda, indicating half an equivalent in grains (40) of anhydrous Acid, $SO_3$.

12 minims contain 1 minim of strong Sulphuric Acid.

Prescribed much diluted, in mixtures; or in cough linctuses, with Confection of Hips and Syrup of Mulberries.

*Dose.*—5 to 30 minims; for children 1 min.

(Austr. Belg. Ger. and Russ. Acid 1, Water 5, sp. g. 1·110–17; Dan. and U.S., Acid 1, Water 7, sp. g. 1·082; Fr., Acid 1, Water 9; all are by weight.)

Contained in Infusum Rosæ Acidum, 1 in 80.

### Not Official.

Mynsicht's Elixir of Vitriol.—Cinnamon, Ginger, Cloves, each 3; Calamus Aromaticus, 8; Galangal, 12; Sage, 4; Peppermint, 4; Cubebs, 2; Nutmeg, 2; Aloes Wood, 1; Lemon Peel, 1; Sugar Candy, 32; Rectified Spirit, by weight, 144; Sulphuric Acid, by weight, 96. Digest for three weeks.
*Dose.*—5 to 10 minims.

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## ACIDUM SULPHUROSUM.

### SULPHUROUS ACID.

Sulphurous Acid Gas, $SO_2$, eq. 64, dissolved in water.

Colourless, with a pungent sulphurous odour; contains 9·2 per cent. by weight of Sulphurous Acid gas.

Should be freshly prepared and kept in well-filled blue bottles, as it changes (by long keeping) into Sulphuric Acid.

*Test.*—Sp. g. 1·040. 34·7 grains mixed with an ounce of Water and a little mucilage of Starch do not acquire a permanent blue colour with the volumetric solution of Iodine, until 1000 grain-measures of the latter have been added. This is a test of its strength, for if there is sufficient Sulphurous Acid it will convert the whole of the 1000 grain-measures of the volumetric solution of Iodine into Hydriodic Acid, which does not render starch blue. Evaporated, it leaves no residue.

The test of the Pharmacopœia is too high; the best Acid that we find in use is only about half the strength of that ordered in the British Pharmacopœia.

### *Medicinal Properties.*

It is a powerful deoxidizing agent, disinfecting and antiseptic, and destructive to vegetable life. Dr. Dewar has published a pamphlet in which he gives the successful results of its use by a vulcanite spray-producer in cases of diphtheria, sore-throat, bronchitis, toothache, and to parts affected with painful neuralgia. For this purpose it is diluted with 1 or 2 parts of Water; this strength will also answer as a lotion for wounds, cuts, ulcers, bed-sores, scalds, and burns; for gargles, 1 to 5 of Water; it destroys the germs of fungi in wounds and parasitic lichen on the skin, and is given for Sarcina Ventriculi.

*Dose.*—½ to 1 drm., in a wineglassful of water, three times a day, relieves constant sickness.

(U.S. sp. g. 1035; not in others.)

**Not Official.**

SULPHITE OF SODA and HYPOSULPHITE OF SODA will be found under "SODA;" still, as they are used for the purpose of eliminating Sulphurous Acid, they are noticed here.

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## ACIDUM TANNICUM.

### TANNIC ACID.

An Acid, $C_{27}H_{22}O_{17}$, eq. 618, extracted from Galls. In pale yellow vesicular masses or thin glistening scales.

Solubility, 10 in 8 of Water; 10 in 8 of Rectified Spirit; sparingly in Ether; 1 in 3 of Glycerine, or if warmed, 1 in 2; also in Olive Oil; insoluble in Chloroform.

These solubilities were made with Tannic Acid, which was very soluble, but different samples vary in solubility.

*Test.*—Exposed to heat on platinum foil it partly melts, swells up, blackens, and at length burns away with a brilliant flame, leaving no residue. The organic matter is first reduced to charcoal, and then burnt away—indicating absence of earthy matters. It strikes a bluish black colour with Persalts of Iron. It precipitates Gelatine, which distinguishes it from Gallic Acid.

(In all the Pharmacopœias.)

### *Medicinal Properties.*

Useful when applied in the dry state to cancer; 1 of Acid dissolved in 6 of Olive Oil is an excellent application for burns. 8 grs. in 1 oz. Water, injected 3 times a day into the nostrils, is good in coryza (cold in the head). 60 grs. in 10 oz. of Rose Water to be used with a spray-producer for relaxed sore-throat. This may also be injected in chronic gonorrhœa with advantage.

Styptic, astringent, in uterine hæmorrhage, dysentery, and diarrhœa.

*Does not affect the secretion of the bile.—Dr. Rutherford.*

*Dose.*—2 to 10 grs.

(In all the Pharmacopœias. Dan. Acidum Gallo-tannicum.)

INCOMPATIBLES.—Mineral Acids, Alkalies, Salts of Antimony, Lead, Silver, and Persalts of Iron, the Vegetable Alkaloids, Gelatine, and Emulsions.

Prescribed in Water, and may be combined with the Protosalts (but not with the Persalts) of Iron. 4 grs. with 1 minim of Glycerine make a nice pill. Externally as a styptic, dissolved in Glycerine; as a wash, 5 grs. to 1 oz. of Water; in ointments, 40 grs. to 1 oz. 60 grs. to 1 oz. of Chalk make an astringent dentifrice. For an injection, 5 grs. to 1 oz. of Water.

## Preparations.

**GLYCERINUM ACIDI TANNICI.** Brownish-yellow.

Tannic Acid, 1; Glycerine, 4. Rub together, and dissolve by a gentle heat. (By weight 1 in 6, by measure 1 in 4½).

*Dose.*—10 to 40 minims.

(U.S. 1 troy oz. and 4 fl. oz.; Fr. 1 and 5 of Glycerine of Starch.)

**SUPPOSITORIA ACIDI TANNICI.** Light drab.

Tannic Acid, 36 grs.; Benzoated Lard, 44 grs.; White Wax, 10 grs.; Oil of Theobroma, 90 grs. Melt the Wax and Oil with a gentle heat, then add the Tannic Acid and Benzoated Lard previously rubbed together, and mix thoroughly. Pour the mixture while it is fluid into suitable moulds of the capacity of 15 grains.

Each conical suppository will contain 3 grains of Tannic Acid.

(U.S. with Theobroma Oil, and contain 5 grains each.)

**SUPPOSITORIA ACIDI TANNICI C. SAPONE.**

Tannic Acid, 36 grs.; Glycerine of Starch, 50 grs.; Curd Soap, in powder, 100 grs.; mix, and add Starch Powder sufficient (90 grs.) to form a mass, to be divided into 12 conical suppositories.

Each suppository contains 3 grs. of Tannic Acid.

*Note.*—Suppositories containing 10 grs. each are made as follows:—Tannic Acid, 60 grs.; Glycerine of Starch, 30 grs.; Curd Soap, 60 grs.; Starch, 10 grs.; mix and divide into 6. They keep well.

*They should not be made with Gelatine.*

**TROCHISCI ACIDI TANNICI.** Light fawn.

Tannic Acid, 360 grs.; Tincture of Tolu, ½ oz.; Refined Sugar, 25 oz.; Gum Acacia, 1 oz.; Mucilage of Gum Acacia, 2 oz.; Distilled Water, 1 oz. Dissolve the Tannic Acid in the Water; add, first the Tincture of Tolu previously mixed with the Mucilage, then the Gum and the Sugar, also previously well mixed. Form the whole into a proper mass; divide it into 720 lozenges, and dry these in a hot-air chamber with a moderate heat.

Each lozenge contains half a grain of Tannic Acid.

*Dose.*—1 to 6 lozenges.

(U.S. 1 grain in each.)

Throat Hospital Pharmacopœia 1¼ grain in each.

### Not Official.

Suppositorium Acidi Tannici cum Opio.—Tannic Acid, 3 grs.; Powder of Opium, 1 gr.; Stearine, 11 grs.; mix.

Pessary or Vaginal Suppository.—Tannic Acid, 10 grs.; Stearine sufficient to make 2 drms. For one suppository; used in leucorrhœa.

1 drm. of Tannic Acid with 7 minims of Glycerine, in a conical suppository, placed in the vagina, and plugged in with a sponge, effectually stops hæmorrhage.

Schuster's Pastilles.—Tannic Acid, 30 grs.; Opium, 1 gr.; Glycerine, q. s. to form suitable cylinders for the male urethra.

Unguentum Acidi Tannici, U.S.—Tannic Acid, 1; Lard, 16; mix.

Unguentum Acidi Tannici c. Opio.—Tannic Acid, 30 grs.; Powdered Opium, 30 grs.; Lard, 1 oz.—*Skin Hospital.*

# ACIDUM TARTARICUM.

## TARTARIC ACID. DEXTROTARTARIC ACID.

A colourless crystalline Acid, $H_2C_4H_4O_6$, eq. 150, obtained from the Acid Tartrate of Potash. In oblique rhombic prisms, of a strongly acid taste.

Solubility, 10 in 8 of Water; 1 in 5 of Rectified Spirit.

*Test.*—100 grains neutralize 133 grains of Bicarbonate of Potash. 75 grains dissolved in Water require for neutralization 1000 grain-measures of volumetric solution of Soda. Its aqueous solution is not affected by Sulphuretted Hydrogen, and gives no precipitate with solution of Sulphate of Lime, or Oxalate of Ammonia—indicating absence of metallic contamination, Oxalic Acid, and Lime. If free from Lime it should leave no residue when burnt. It is distinguished from all other Acids by forming with strong solutions of neutral salts of Potash a crystalline precipitate (a bitartrate).

### *Medicinal Properties.*

The same as Citric Acid, for which it was once substituted in saline mixtures.

*Dose.*—10 to 30 grains in Water.

(In all Pharmacopœias.)

Incompatibles.—Salts of Potash, of Lime, of Mercury, and of Lead, and the vegetable astringents.

When Citric Acid was very dear, Tartaric Acid was much employed to make saline draughts, and it frequently perplexed the dispenser, for if the Bicarbonate of Potash was added to a solution of Tartaric Acid, Bitartrate was immediately formed, and was precipitated, whereas if the Tartaric Acid was added to the Potash Salt, it might be added to the point of saturation, and remain perfectly soluble.

Contained in the tartrates of Alkalies, Antimony, and Iron.

# ACONITI FOLIA.

## ACONITE LEAVES.

### HERB.

The fresh leaves and flowering tops of the perennial *Aconitum Napellus*, gathered in July, when about one-third of the flowers are expanded, from plants cultivated in Britain.

*Medicinal Properties.*

Anodyne. Relieves acute rheumatism, gastrodynia, and carcinoma. It diminishes expectoration in phthisis, and lessens the frequency of the pulse; it has also been found useful in tetanus.

### Preparation.

**EXTRACTUM ACONITI.** Black.

Take 112 pounds of fresh leaves and flowering tops, bruise them, press out the juice, heat it gradually to 130° F., and separate the green matter by a calico filter. Heat the strained liquor to 200° to coagulate the albumen, and again filter. Evaporate the filtrate by a water bath to the consistence of a thin syrup; then add to it the green colouring matter previously separated, and stirring the whole together assiduously, evaporate at a temperature not exceeding 140° to a pill consistence.

100 lbs. of plant produce 50 lbs. of juice = 7 lbs. extract, subject to variation.

*Dose.*—1 to 2 grs.

(Fr. juice from leaves evaporated, *without* albumen; Belg. juice from leaves evaporated, *with* albumen, also clarified juice evaporated and mixed with powdered leaves; Russ. aqueous from bruised herb; Belg. and Dan. alcoholic from bruised herb; Fr. and U.S. alcoholic from dried leaves; Austr. Ger. and Russ. alcoholic from root.)

### Not Official.

SUCCUS.—Aconite Herb Juice, 3; Rectified Spirit, 1; mix, and after seven days filter.

*Dose.*—15 to 20 minims.

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## ACONITI RADIX.

### ACONITE ROOT.

The root (a blackish brown tap-root) is collected during winter and dried. Cultivated in Britain or imported from Germany; the younger roots, of a lighter colour, are not considered so potent.

*Medicinal Properties.*

Same as that of the plant, but possessed in a stronger degree. Internally, it lowers the pulse; externally, it relieves rheumatic and neuralgic pain.

### Preparations.

**LINIMENTUM ACONITI.** Brown.*

Aconite Root, in powder, 20; Camphor, 1; Rectified Spirit, to percolate, 20; moisten the root and macerate for three days, then pack in a percolator, and pour sufficient Rectified Spirit upon it to produce with the Camphor 20. =(1 in 1).

Applied with a camel's-hair pencil alone, or mixed, in equal proportions, with Soap Liniment or Compound Camphor Liniment, and rubbed on the part, (but not upon an abraded surface,) relieves acute neuralgia.

(U.S. Percolate with Alcohol 8 troy oz. of Aconite Root until 32 fl. oz. have passed through, evaporate this to 7 fl. oz., and add 1 fl. oz. of Glycerine; not in others.)

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* Kept well for 8 years.

**TINCTURA ACONITI.** Light Brown.

Powdered Root, 1; Rectified Spirit, to percolate, 8; macerate for forty-eight hours with three-fourths of the Spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remaining Spirit; when it ceases to drop press the marc and add Spirit to make up 8. =(1 in 8).

*Dose.*—5 to 15 minims twice or thrice a day.

5 minims given every three or four hours, increasing the dose to 20 minims, succeeded in curing a case of neuralgia in the face, when every other remedy tried had failed.

Half a minim in Water given every half-hour reduces abnormal temperature, and leads to free perspiration (T. Spencer Wells).

It is said by Dr. Fleming to be less likely to irritate the bowels than the extract.

(U.S. 12 troy oz. Root in 32 fl. oz.; Austr. 1 Root and 5 Spirit; Ger. and Russ. 1 Root and 10; Dan. and Russ. 1 dried herb and 10; Fr. 1 fresh leaves and 1; Belg. 1 dried herb and 5; 1 fresh herb and 1.)

Symptoms of poisoning by Aconite, violent purging, numbness of limbs.

ANTIDOTES.—In case of poisoning by Aconite, the antidotes are emetics, stimulants internal and external.

Atropia is antagonistic to the action of Aconitia on the heart. (*Lancet*, Jan. 8th, 1881, p. 74.)

### Not Official.

EXTRACTUM ACONITI RAD. ALCOHOLIC.—Austr. Ger. and Russ. Dose ⅛ to ½ gr.

CHLOROFORMUM ACONITI.—Powdered Root, 20; Chloroform to percolate, 20. 1 of this, mixed with 7 of Liniment of Aconite, sprinkled on impermeable piline and applied, or painted on with a camel's-hair brush, relieves neuralgia in almost every form.

TROCHISCI ACONITI.—Each lozenge contains ½ a minim Tincture of Aconite. Dose, one lozenge every half-hour or hour in tonsilitis and febrile affections of the throat.—*Throat Hospital Pharmacopœia.*

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## ACONITIA.

ACONITIA.

An alkaloid, obtained from Aconite.

A white, usually amorphous powder.

Solubility, 1 in 150 of cold Water; 1 in 50 of boiling Water, much more soluble in Alcohol and in Ether. Alkaline to test paper.

*Test.*—When burnt it leaves no residue.

### *Medicinal Properties.*

Not for internal use. It is a very strong poison.

It relieves acute nervous pain when rubbed on the part in the form of ointment, producing a tingling sensation, followed by numbness.

(Austr. Belg. Fr. Ger. Russ. and U.S.; not in Dan.)

### Preparation.

**UNGUENTUM.** Cream-colour when fresh, but becomes pinkish when kept.

Aconitia, 8 grs.; Rectified Spirit, ½ drm.; dissolve and add Lard, 1 oz.; mix. =(about 1 in 60).

Not Official.

## ACTÆA RACEMOSA.

BLACK SNAKE ROOT.

**TINCTURA.**

Bruised Root, 1; Proof Spirit, 4; macerate fourteen days, and strain.

*Medicinal Properties.*—Given internally for neuralgia and acute rheumatism.

*Dose.*—30 to 60 minims.

Externally for reducing inflammation.

Cimicifugin—the resin obtained from *Actæa racemosa*—is given in doses of 1 to 3 or 4 grs., as a nerve tonic and sedative.

## ADEPS PRÆPARATUS.

PREPARED LARD.

*Syn.* Axungia, *Edin.*

The purified fat of the Hog, Sus scrofa.

Take of the internal fat of the abdomen of the hog, perfectly fresh, 14 pounds. Remove as much of the membranes as possible, cut the fat into small pieces, put it into a suitable vessel with about 4 gallons of cold water, and while a current of water is running through the vessel, break up the masses of fat with the hands, exposing every part to the water, so that whatever is soluble may thus be dissolved and carried away. Afterwards, collect the washed fat on a sieve or in a cloth, drain away as much as possible of the water, liquefy the fat at a heat not exceeding 212° F., and strain through flannel, pressing the residue while hot, then put it into a pan heated by steam, and keep it at a temperature a little above 212°, stirring it continually until it becomes clear and entirely free from water; finally strain it through flannel.

Soluble entirely in Ether and in Oil of Turpentine; melts at 100° F.

Lard is not adulterated as a rule, but it was frequently prepared in the country with little care, and consequently bad in colour and odour; now, however, it is made upon a very large scale by London manufacturers, of superior quality.

The Author has found that, if the membrane be first carefully picked out from the flare of recently killed pork, which is then liquefied over a water bath at a boiling heat, strained through flannel, and again heated until bright and entirely free from water, it keeps better than if prepared by the process directed in the Pharmacopœia.

It is apt to grow rancid by keeping, and mouldy if it contains water.

It is the basis of several ointments.

*Test.*—Distilled Water in which it has been boiled when cooled and filtered gives no precipitate with Nitrate of Silver, and is not rendered blue by the addition of solution of Iodine—indicating absence of Salt and Starch.

### *Medicinal Properties.*

Emollient. Added to poultices to prevent them drying and sticking to the skin. Used also in scabies, and to destroy pediculi.

(In all the Pharmacopœias.)

Used in all the ointments, except those prepared with Benzoated Lard; if mixed with Red Oxide of Mercury, it gets blue on keeping.

Several substitutes for lard have been proposed, and among them certain products obtained from petroleum which are sold under various names (*vide* Vaseline).

### Not Official.

UNG. ODORATUM VEL ADEPS ODORIFERUS, made by mixing Lard and Magnolia Pomade in equal weights.

ADEPS OXYGENATUS is made by heating 8 of Lard with 1 Nitric Acid, sp. g. 1·500, added by degrees, and stirring till Nitrous Acid gas is given off, then remove from the fire and continue the stirring until it solidifies. Useful to dilute Citrine Ointment; for when Lard is used it reduces the Mercury, and thereby destroys the lemon colour of the ointment. It is, however, found too hard for use in cold weather, and is then better prescribed with half its amount of Almond Oil.

(Ger., Unguentum Oxygenatum, Lard, 50; Nitric Acid (sp. g. 1·185), 3.)

## ADEPS BENZOATUS.

### BENZOATED LARD.

Prepared Lard, 16 oz.; Benzoin, in powder, 160 grs.; heat together in a water bath for two hours, stirring occasionally, and strain; lastly, stir till cold. Keeps well.

(Out of 160 grs. of Siam Benzoin in tears, 50 grs. remain undissolved.)

Used for making suppositories, and for the following ointments:—Galls, Lead, Sulphur, and Zinc.

Solution of Subacetate of Lead is prescribed with this for eczema, and when the two are incorporated the odour of Benzoin is destroyed.

(RUSS.—Benzoin 1, Adeps Depurat. 50; U.S. (Ung. Benzoini), Tincture of Benzoin, 2 fl. oz., Lard, 16 troy oz., add the Tincture to the melted Lard, stir till the Spirit is evaporated and the ointment cooled.)

## ÆTHER ACETICUS.

### ACETIC ETHER.

$C_2H_5C_2H_3O_2$, eq. 88.

May be obtained by distilling a mixture of dry Acetate of Soda, 8 parts; Rectified Spirit, 5 parts; Sulphuric Acid, 10 parts; adding the distilled product to half its weight of Chloride of Calcium in a stoppered bottle, letting them remain together for 24 hours, and then decanting and rectifying the ethereal liquid.

*Characters and Tests.*—A colourless liquid, with an agreeable ethereal odour. Sp. g. about 0·900. Boiling point 166° F. Solubility about 1 in 12 of Water. Soluble in all proportions in Rectified Spirit and in Ether. It should be free from acid.

***Dose.***—20 to 60 mins.

(Austr. Dan. Ger. and Russ. sp. g. ·9; Fr. sp. g. ·92; Belg. sp. g. ·89; not in U.S.)

# ÆTHER.

## ETHER.

*Syn.* ÆTHER SULPHURICUS, *Edin. Dub.*

A volatile and inflammable liquid, prepared from Alcohol.

Colourless; contains 92 per cent. by volume of pure Ether (Oxide of Ethyl), $C_4H_{10}O$, eq. 74, with about 8 per cent. of Rectified Spirit.

Solubility, 1 in 10 of Water; freely in Rectified Spirit.

It is colourless, of a strong and sweet odour, hot and pungent in taste. It evaporates speedily in the open air, with the production of considerable cold. When good, it evaporates from the hand without leaving a disagreeable odour. It boils below 105° F., and its vapour is very dense and very inflammable. It dissolves Iodine and Bromine freely; Sulphur and Phosphorus sparingly. It dissolves Corrosive Sublimate freely, and if Ether be boiled with Calomel contaminated with it, decanted and evaporated, the crystals of Corrosive Sublimate are left. It is also a solvent of the volatile and fixed oils, many resins and balsams, caoutchouc, and most of the organic vegetable alkaloids. It does not dissolve Potash and Soda, in which respect it differs from Alcohol. Water dissolves a tenth of its volume of Ether, and reciprocally Ether takes up about the same proportion of Water. When Water dissolves more than a tenth of its volume, the Ether contains Water or Alcohol, or both. Ether unites in all proportions with Alcohol.

*Tests.*—Sp. g. ·735. 50 measures agitated with an equal volume of Distilled Water are reduced to 45 by an absorption of 10 per cent. It scarcely reddens Litmus; agitated with half its volume of a saturated solution of Chloride of Calcium, it is not lessened in bulk—indicating absence of Acid and Water; leaves no residue on evaporation.

### *Medicinal Properties.*

Best prescribed as Spirit of Ether, which readily mixes with water.

*Note.—Methylated Ether leaves an odour after it has evaporated.*

It is a powerful, diffusible stimulant, expectorant, antispasmodic, and narcotic, and is of great use in dyspnœa and gastralgia. Used to expel flatus from the stomach, and to allay pain and cramp in that organ. In nausea it is given as a cordial. It was used 35 years ago as an anæsthetic,* and is still preferred by some to Chloroform.

*Dose.*—20 to 40 minims.

(U.S. ·750; Belg. ·740; Austr. ·730; Dan. ·725; Fr. ·723; Ger. and Russ. ·728.)

Contained in Collodium, Collodium Flexile, and Liquor Epispasticus. Employed in the preparation of Extractum Ergotæ Liquidum, &c.

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* The Author devised the first apparatus for the inhalation of Ether, in 1846, which he has presented to the Museum of University College. Mr. Liston performed the first capital operation in this country with this apparatus; the patient not suffering the least pain, nor, indeed, after the return of consciousness, could he be persuaded that his leg was off until he had placed his hand upon the stump.

### Preparation.

**SPIRITUS ÆTHERIS.** Called HOFFMAN'S ANODYNE in all the Continental Pharmacopœias.

Ether, 1; Rectified Spirit, 2. =(1 in 3).

Sp. g. ·809.

*Dose.*—30 to 60 minims.

(U.S. Spiritus Ætheris Compositus, with Ethereal Oil; Belg. Æther Sulphuricus Alcoholicus, sp. g. ·795; Russ. 1 in 3, sp. g. ·800; Dan. and Ger. 1 in 4, sp. g. ·808—·812; Austr. 1 in 4, sp. g. ·820; Fr. equal weights.)

Contained in Tinctura Lobeliæ Ætherea.

### Not Official.

SPIRITUS ÆTHERIS MURIATICUS.—Sp. g. ·860.

*Syn.*—SP. SALIS DULCIS; CLUTTON'S FEBRIFUGE SPIRIT.

A very old preparation, and is still prescribed for feverish symptoms.

*Dose.*—30 to 60 minims.

(Dan. and Ger. (Sp. Ætheris Chlorati) sp. g. ·838—·842; Belg., Æther Chlorhydricus Alcoholicus, sp. g. ·840.)

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## ÆTHER PURUS.

PURE ETHER.

Ether, $C_4H_{10}O$, free from Alcohol and Water; shake 20 of Ether with 10 of Water in a bottle, and after a few minutes decant the Ether, mix it with 10 of fresh Water, shake, and again decant. Put the decanted Ether into a retort, with $\frac{1}{8}$ of recently burnt Lime, and 2 of dried Chloride of Calcium; attach closely a receiver, and let them stand twenty-four hours, then distil with a gentle heat.

Boils at 96° F.; density of Vapour, 2·586.

Sp. g. ·720.

(Austr. ·725; Fr. ·720; U.S. ·728.)

### *Medicinal Properties.*

Inhaled for surgical operations, 2 oz. will generally suffice for an operation lasting ten minutes if inhaled from a well-constructed inhaler in a room at the temperature of 70° to 75° F., but not higher; it is also inhaled with great benefit in painful asthma.

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## ÆTHERIS NITROSI SPIRITUS.

*See* SPIRITUS ÆTHERIS NITROSI.

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## ALBUMEN OVI.

EGG ALBUMEN.

The liquid white of the egg of *Gallus Banckiva*, var. *domesticus*.

Not Official.

## ALCHEMILLA ARVENSIS.

Called Parsley Breakstone.

Astringent, tonic, diuretic, given to discharge small calculi from the kidney and bladder.

Decoctum.—Flower-heads, 1 oz.; Water, 20 oz. Boil ten minutes and strain.

*Dose.*—A wineglassful three times a day.

## ALCOHOL AMYLICUM.

AMYLIC ALCOHOL.

*Syn.* Fousel Oil.

Sp. g. ·818. Used in the production of Valerianate of Soda. (U.S.)

## ALOE BARBADENSIS.

BARBADOES ALOES.

The inspissated juice of the leaf of the *Aloe vulgaris;* usually imported from Barbadoes in gourds.

In the Island of Barbadoes they cut the leaves transversely and allow the juice to flow out. This juice is evaporated to an extract; and if carefully prepared, is of a liver colour.

Solubility in Water, 75 per cent.

It is found by experiment that the aqueous extract is far more active than is the resinous portion of Aloes; the Barbadoes Aloes containing a larger amount of this than the Socotrine, is perhaps the reason why the Barbadoes is the more purgative; thus, 2 grs. are equal to 3 grs. of Socotrine.

### *Medicinal Properties.*

Purgative, acting chiefly on the large intestine. Employed as an enema in dislodging ascarides from the rectum, also as a stimulating cathartic in the constipation of amenorrhœa.

*Dose.*—2 to 4 grs.

(Fr. and U.S.; not in others.)

Contained in Pil. Cambogiæ Comp., Pil. Colocynthidis Comp., and Pil. Colocynthidis et Hyoscyami.

### Preparations.

**ENEMA ALOES BARBADENSIS.**

Barbadoes Aloes, 40 grs.; Carbonate of Potash, 15 grs.; Mucilage of Starch, 10 oz.; mix for one enema.

10 grs. are found enough generally.

**EXTRACTUM ALOES BARBADENSIS.** Black.

Barbadoes Aloes, 16 oz. in small pieces, thoroughly mixed with 1 gallon (=160 oz.) of boiling Water, allowed to stand for twelve hours, and the clear liquor evaporated to dryness.

*Dose.*—½ to 2 grs. British Ph. 2 to 6 grs.

(100 parts of Aloes yield 75 parts of extract.)

**PILULA ALOES BARBADENSIS.** Black.

Barbadoes Aloes, in powder, 2; Hard Soap, in powder, 1; Oil of Caraway, ⅛; Confection of Roses, 1. Mix. =(1 in 2).

*Dose.*—4 to 8 grs.

**PILULA ALOES ET FERRI.** Intense greenish-brown.

Barbadoes Aloes, 2; Sulphate of Iron, 1½; Compound Powder of Cinnamon, 3; Confection of Roses, 4. Mix. (6 of Confection are required.) =(about 1 in 6).

*Dose.*—5 to 10 grs.

**Not Official.**

Aloin.—A yellow crystalline substance, obtained from Aloes.

*Dose.*—1 to 2 grs. in pill.

Pilula Aloes Diluta.—Marshall Hall's Pill. Take of Barbadoes Aloes 4 oz.; dissolve in water and strain, then add 4 oz. Extract of Liquorice, 4 oz. Treacle, 4 oz. Hard Soap thinly sliced; mix and evaporate to a pill consistence.

*Dose.*—3 or 4 grains.

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## ALOE SOCOTRINA.

### SOCOTRINE ALOES.

The inspissated juice of the leaf of one or more undetermined species of Aloe.

It is not known exactly how they prepare the Aloes in Socotra. It is supposed that the leaves are boiled, and if that be true it may account for the large quantity of resin they contain, compared with the Barbadoes; for long boiling converts some of the extractive matter into resin.

Usually imported in skins and casks from Bombay; produced in Socotra.

Solubility in Water, 50 per cent.; the residue is pretty well inert.

*Medicinal Properties.*

Purgative, but slow in action. Given in mesenteric disease and distended bowels. Although the purgative property acts chiefly on the lower portion of the intestinal canal, it produces on the upper part tonic and stomachic effects, when small doses only are given. One grain, with ⅓ gr. Extract of Nux Vomica, is an excellent pill for this purpose and to relieve chronic dyspepsia. Aloes, combined with Rhubarb, Soap and Scammony, where there is a defective secretion of bile; with Iron and Myrrh for amenorrhœa.

Aloes were formerly supposed to aggravate Hæmorrhoids, but the Aqueous Extract commonly given in pills, and the Compound Decoction are free from objection.

*In very large doses is a powerful hepatic stimulant. It renders the bile more watery, but at the same time increases the secretion of the biliary matter by the liver.—Dr. Rutherford.*

*Dose.*—3 to 6 grs.

(In all the Pharmacopœias.)

Contained in Extractum Colocynth. Co., Pil. Rhei Co., and Tinct. Benzoini Co.

## Preparations.

**DECOCTUM ALOES COMPOSITUM.** Deep blood-red.

Extract of Socotrine Aloes, 120 grs.; Myrrh, 90 grs.; Saffron, 90 grs.; Carbonate of Potash, 60 grs.; Extract of Liquorice, 1 oz.; Compound Tincture of Cardamoms, 8 oz.; Distilled Water, a sufficiency. Reduce the Extract of Aloes and Myrrh to coarse powder, and put them, together with the Carbonate of Potash and Extract of Liquorice, into a suitable covered vessel with a pint (=20 oz.) of Distilled Water, boil gently for five minutes, then add the Saffron: let the vessel with the contents cool, then add the Tincture of Cardamoms, and covering the vessel closely, allow the ingredients to macerate two hours; finally strain through flannel, pouring as much Distilled Water over the contents of the strainer as will make the strained product measure 30 oz.
4 grs. in 1 fl. oz. = (1 grain in 120 minims).

*Dose.*—½ to 2 oz. as a mild cathartic, tonic, and antacid. Known to the public as the Baume de Vie.

Extract of Liquorice covers the taste of Aloes better than anything else. The Brit. Ph. increased the Aloes, but did not increase the Liquorice in proportion; the preparation is, therefore, disagreeably bitter. A small addition of the Liquorice makes it palatable. It is a most valuable aperient; 1 oz. or 1½ oz., equal to 6 grs. Aloes, act naturally without griping, whereas 3 grs. of Aloes in a pill will probably purge and gripe too. A valuable paper on Aloes (*Medical Times and Gazette*, Jan. 4, 1868) records the fact, that a very much larger dose of Aloes can be given in solution than in the solid form.

**ENEMA ALOES** *in the British Pharmacopœia occurs under both kinds of Aloes, indicating that either may be used.*

**ENEMA ALOES SOCOTRINÆ.**

Socotrine Aloes, 40 grs.; Carbonate of Potash, 15 grs.; Mucilage of Starch, 10 oz.; mix for one enema.

As an anthelmintic 3 to 4 ounces only should be used.

**EXTRACTUM ALOES SOCOTRINÆ.** Black.

Socotrine Aloes, 16 oz.; thoroughly mixed with one gallon (=160 oz.) of boiling Water, allowed to stand for twelve hours, and the clear liquor evaporated to dryness.

*Dose.*—1½ to 3 grs. Brit. Ph. 2 to 6 grs.

(100 parts of Aloes yield 50 parts extract.)

The extract being more active than the Aloes, a smaller pill can be given, and it has the advantage of acting more pleasantly.

(In all the Pharmacopœias except Fr. and U.S.)

Belg. and U.S. have Aloe Purificata, but that is an Alcoholic Extract.

**PILULA ALOES SOCOTRINÆ.** Very dark brown.*

Socotrine Aloes in powder, 2; Powdered Hard Soap, 1; Volatile Oil of Nutmeg, ⅛; Confection of Roses, 1. Mix. =(1 in 2).

*Dose.*—5 to 10 grs.

(Belg. and Fr., Aloes and Soap only, 1 in 2; U.S. 1 in 2; not in others.)

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* Kept well in closed vessels 8 years.

### Preparation.

**ALUMEN EXSICCATUM.** *Syn.* Alumen Ustum. Dried Alum. Opaque white.

Heat the Alum in a porcelain capsule till it liquefies; raise and continue the heat, not allowing it to exceed 400° F., till aqueous vapour ceases to be disengaged, and then reduce the residue to powder.

100 parts of Alum yield about 53 parts of dried Alum.

For external use only. Escharotic, used to remove fungous flesh.

(Same as U.S.; the other Pharmacopœias with Potash.)

### Not Official.

Alum Cataplasm, or Poultice.—Alum, 60 grs.; the whites of two eggs. For chilblains.

Alum Gargle.—Broken rose petals, 3 drms.; Diluted Sulphuric Acid, 3 drms.; cold Distilled Water, 10 oz.; digest for two hours, and strain 8 oz.; then add Alum, 2 drms.; Sugar, 4 drms.; Rectified Spirit, 4 drms.; dissolve. This kept well 7 years.

When used, to be mixed with an equal bulk of Water.

Alum, 1 drm.; Honey, 2 drms.; Water, 6 oz.: mix.—*Middlesex Hospital.*

Alum, 1 drm.; Tinct. Myrrh, ½ drm.; Water, 4 oz.—*Consumption.*

Alum Whey.—Alum, 120 grs. boiled in a pint of Milk. *Dose.*—A wineglassful.

Alum, a few grains, rubbed with white of egg, forms a coagulum; a good application to black bruises.

Iron Alum is an Alum in which Iron takes the place of Aluminium, and is especially useful in bleeding from the kidneys; it arrests the hemorrhage and the anæmia that accompanies it; it is considered more astringent than Alum.

The aqueous solution will, even after filtration, let fall Peroxide of Iron.

*Dose.*—5 to 10 grs.

Chloride of Aluminium, called Chlor-Alum, is employed as a disinfectant.

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## AMMONIACUM.

AMMONIACUM.

A gum-resinous exudation from *Dorema Ammoniacum*, in tears or masses, of a pale yellow colour changing to a cinnamon brown on long exposure to the air, brittle when cold, but readily softens with heat, and when broken has an opaque white and shining surface. Collected in Persia and the Punjaub.

Solubility, sparingly in Water, but forms with it a white emulsion; when 50 grs. are digested in 2 oz. of Rectified Spirit, 40 grs. are dissolved, but with Proof Spirit only 20 grs. are dissolved.

Contained in Emplastrum Galbani, and in Pilula Scillæ Composita, Pil. Ipecacuanhæ et Scillæ.

### *Medicinal Properties.*

Antispasmodic, stimulant, expectorant, in chronic catarrh, bronchitic affections, and asthma, either in mixture or in pill.

*Dose.*—10 to 20 grs.

(In all the Pharmacopœias.)

### Preparations.

**EMPLASTRUM AMMONIACI CUM HYDRARGYRO.** *See* HYDRARGYRUM.

As the value of this preparation depends chiefly upon the Mercury it contains, the formula is given under Hydrargyrum.

**MISTURA AMMONIACI.** A milk-like emulsion.

Ammoniacum, ¼ oz., rubbed down with Water 8 oz., gradually added; strain. = (1 in 32).

*Dose.*—½ to 1 oz. as an expectorant; may be combined with 15 minims of Tincture of Squill, or 15 minims of Fetid Spirit of Ammonia.

(U.S. about 1 in 30; not in others.)

### Not Official.

**Mistura Ammoniaci Comp.**—Comp. Tinct. Camphor, ½ drm.; Oxymel of Squill, ½ drm.; Ammoniacum Mixture, 1 oz.—*Consumption.*

**Mist. Ammoniaci Ipec. et Lobeliæ.**—Ipecac. Wine, 10 mins.; Ethereal Tinct. Lobelia, 10 mins.; Ammoniacum Mixture, Water, of each ½ oz.—*Chest.*

Not Official.

## AMMONIUM.

AMMONIUM.

$NH_4$, eq. 18.

According to Roscoe, Ammonium has been isolated, but it does not seem to be able to exist in an uncombined state, unless under high pressure and at a low temperature; it is a dark blue liquid possessing a metallic lustre, and very readily decomposes into Ammonia and Hydrogen.

## AMMONII BROMIDUM.

BROMIDE OF AMMONIUM.

$NH_4Br$, eq. 98.

In small colourless crystals, which may be sublimed unchanged. Its aqueous solution does not exhibit a blue colour with Mucilage of Starch and a drop of Chlorine Water—showing absence of Iodine.

If too much Chlorine water be added, the presence of Iodine may be overlooked owing to the formation of colourless Chloride of Iodine.

Solubility, 1 in 1½ of Water; 1 in 13 of Rectified Spirit.

### *Medicinal Properties.*

An excellent nervine, good in hysterics; especially useful for sleeplessness of nervous persons where there is no organic disease; relieves headache and neuralgic pain, also the intolerable itching in prurigo.

For whooping cough, dose for children, 1 to 5 grs. three times a day in Water.

*Dose.*—5 to 20 grains.

(U.S. and Russ.; not in others.)

**Incompatibles.**—Acids and Acidulous Salts, and Sp. of Nitrous Æther.

### Not Official.

**Lozenges**, containing 2 grains of Bromide of Ammonium in each, are given to children for whooping cough; also are convenient for travellers. Dose, 1 to 3 lozenges.

## AMMONII CHLORIDUM.

CHLORIDE OF AMMONIUM.

*Syn.*—Ammoniæ Hydrochloras; Ammoniæ Murias; Sal Ammoniac.

$NH_4Cl$, eq. 53·5.

Usually prepared by sublimation; colourless, inodorous, translucent, fibrous masses, tough and difficult to powder.

It should be recrystallized for Medicinal use.

Solubility, 1 in 3 of Water; 1 in 55 of Rectified Spirit; 1 in 5 of Glycerine.

*Test.*—When heated it volatilizes without decomposition, and leaves no residue. Its aqueous solution gives a white precipitate with Nitrate of Silver soluble in Ammonia.

### *Medicinal Properties.*

Expectorant in chronic bronchitis, is a cholagogue and emmenagogue; diaphoretic, diuretic, and alterative in rheumatism, useful in portal dropsy, given in doses of 20 or 30 grs. in half a tumbler of cold water every 4 or 6 hours, in scrofulous and syphilitic enlargement of the glands; useful in hepatitis and periostitis, when the acute stage is passed and suppuration set in, said to counteract the tendency to albumenoid degeneration of any organ. In facial neuralgia, in doses of 30 grains three times a day, and relieves after 4 or 5 doses, otherwise it is of no use to continue it. Externally rubbed moist on corns and warts removes them; as a stimulant and resolvent in bursæ and indolent tumours, also in acne simplex.

*Stimulates the intestinal glands, but not the liver.—Dr. Rutherford.*

B. P. Dose, 5 to 20 grains.

*Dose.*—10 grains in a claret-glassful of cold Water, frequently repeated, allay distressing fits of coughing in bronchitis. 10 mins. Sp. Chloroform and 30 of Syrup render it palatable. Tincture of Squill may be tried if this fails.

(In all the Pharmacopœias. Austr. Dan. Ger. and Russ. Ammonium Chloratum.)

Incompatibles.—Alkalies, Alkaline Earths, and their Carbonates; Lead and Silver Salts.

### Not Official.

Draught.—Ammonii Chloridi, gr. xv; Tinct. Limon., ♏xlv; Sp. Chloroformi, ♏x; Aquæ, ad ℥iss.

Lotion.—1 oz. with 1 oz. Rectified Spirit and 10 oz. Water; Vinegar is sometimes added, to be applied as a dressing for bruises.

Lozenges.—2 or 3 grains each, are much resorted to for bronchitis.

*Dose.*—2 to 4 lozenges.

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### Not Official.

## AMMONII IODIDUM.

IODIDE OF AMMONIUM.

A whitish deliquescent salt, granular or in crystals, which readily turns yellow.

Solubility: 4 in 3 of water; 1 in 4 of Rectified Spirit.

### *Medicinal Properties.*

Similar in action to the Iodide of Potassium, but more active.

*Dose.*—2 to 5 grains three times a day.

(Belg. U.S. and Russ.)

An ointment of it is made with ʒ ij to 1 oz. of Lard, and used night and morning.

## AMMONIA.

### AMMONIA.

This important compound is chiefly produced artificially, but it exists in some volcanic products, and is discoverable in sea-water. It is found also in putrid urine and in the salts produced by the decomposition of animal matter.

Its history in the form of Sal Ammoniac is very ancient. This salt was manufactured in very early times from soot afforded by the combustion of camels' dung, from which it was obtained by sublimation. The process was chiefly conducted in the neighbourhood of the temple of Jupiter Ammon in Egypt, and to this circumstance it owes its name; it was afterwards obtained either from putrid urine or by the destructive distillation of animal substances.

The chief source at present is the liquor from the gas-works, but the Ammonia produced in this way is apt to contain impurities, particularly the organic bases known as "the compound Ammonias."

The purest form of Ammonia is that obtained as a by-product in the manufacture of Borax. The Boracic Acid of Tuscany, when saturated with Soda, evolves very considerable quantities of pure Ammonia, and the Liquor Ammoniæ and Carbonate of Ammonia, produced in this way, are sold under the name of Volcanic Ammonia, and are to be preferred to all others.

*The whole of the Preparations of Ammonia are here grouped.*

## AMMONIÆ ACETATIS LIQUOR.

### SOLUTION OF ACETATE OF AMMONIA. MINDERERUS SPIRIT.

$NH_4.C_2H_3O_2$, eq. 77, dissolved in Water.

Carbonate of Ammonia, 3½, or a sufficiency; Acetic Acid, 10; Distilled Water, 50.

Reduce the Carbonate to powder and add it gradually to the acid to form a neutral solution, then add the water.

To ascertain when the solution is neutral a small sample should be taken out in a test-tube, gently warmed, and well shaken to free it from Carbonic Acid before trying it with litmus or turmeric-paper.

### *Medicinal Properties.*

Diaphoretic and refrigerant. Internally, it increases the secretion by the skin and kidneys, therefore useful in febrile and inflammatory diseases, and in dysmenorrhœa. Externally, in the proportion of 1 to 10 of Water, as a collyrium in chronic ophthalmia, or mixed with weak spirit for a cooling lotion.

*Dose.*—2 to 6 drms.; for children, ½ to 1 drm.

(Austr. sp. g. 1·030; Belg. sp. g. 1·029; Fr. sp. g. 1·036, and U.S.; all made with Carbonate. Dan. sp. g. 1·038 to 1·042; Ger. sp. g. 1·028 to 1·032; and Russ. sp. g. 1·030 to 1·032; all made with Caustic Ammonia.)

A nice fever mixture is made with Liq. Ammon. Acet. ʒij, Ammon. Carbon. gr. viij, Succ. Limon. ʒij, Syrup. ʒj, Aquæ Camphor. ℥ss, Aquæ ad ℥iv: mix; a fourth part every six hours.

INCOMPATIBLES.—Acids, Potash, Soda, and their Carbonates, Lime Water, Salts of Lead and Silver.

### Not Official.

LIQUOR AMMON. ACET. CONCENTRATUS.—Strong solution of Ammonia, 7; Acetic Acid, 20, or a sufficiency. This was in the first British Pharmacopœia, and is convenient for travelling, as it occupies only one-fifth of the bulk of that of the present Pharmacopœia.

Made in this way the neutrality is easily effected, whilst in the other the Carbonic Acid present is deceptive.

*Dose.*—15 to 30 minims.

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## AMMONIÆ BENZOAS.

BENZOATE OF AMMONIA.

**$NH_4C_7H_5O_2$**, eq. 139.

In colourless laminar crystals.

Solution of Ammonia, 3, or a sufficiency; Benzoic Acid, 2; Distilled Water, 4; dissolve and evaporate, keeping the Ammonia in slight excess, and set aside to crystallize; when 3½ of Ammonia are used, it makes a neutral salt.

Solubility of the neutral Salt, 1 in 5 of Water; 1 in 18 of Rectified Spirit.

*Test.*—When heated, it sublimes without residue.

### *Medicinal Properties.*

Diuretic, employed in dropsy, and in gout when chalk-stones are deposited near the joints. It is more soluble than Benzoic Acid, and therefore acts more quickly. Is valuable in catarrhus vesicæ with alkaline urine, also in cases of phosphatic deposit. Benzoic Acid, when taken into the body, appears to take up Glycocol and forms Hippuric Acid. The Ammonia does not, like Potash and Soda, pass through the kidneys.

*Stimulates the liver, but not quite so powerfully as the Benzoate of Soda; neither of them stimulates the intestinal glands.—Dr. Rutherford.*

*Dose.*—10 to 20 grains in Water.

(Same as U.S.; Fr. Benzoate d'Ammoniaque; not in others.)

INCOMPATIBLES.—Persalts of Iron, Liquor Potassæ, and Acids.

## AMMONIÆ CARBONAS.

### CARBONATE OF AMMONIA.

*Syn.*—Ammoniæ Sesquicarbonas.

$N_4H_{16}C_3O_8$, eq. 236.

In translucent crystalline masses; volatile and pungent.

Sublimed from a mixture of Chalk and Sal Ammoniac.

Solubility, 1 in 4 of Water; in Spirit sparingly; 1 in 5 of Glycerine.

*Test.*—59 grains dissolved in an ounce of Distilled Water are exactly neutralized by 1000 grain-measures of the volumetric solution of Oxalic Acid; 15 grains are neutralized by 17 grains of Citric Acid, or a tablespoonful of Lemon Juice. Volatilizes entirely when heated.

### *Medicinal Properties.*

Antacid, stimulant, sudorific, and expectorant. Frequently combined with Ipecacuanha in bronchitis. Rarely as an emetic in ½ drm. doses. 60 grs. of this, or two tablespoonfuls of Sal Volatile to 20 ozs. of hot water sponged on the body refreshes it.

*Dose.*—3 to 10 grains in Camphor Water ½ oz., and Water 1 oz., mixed.

(Dan. Supercarbonas Ammonicus; U.S. Am. Carb.; Austr. Belg. Ger. and Russ. Ammonium Carbonicum; Fr. Carbonate d'Ammoniaque.)

Incompatibles.—Acids, Acidulous Salts, Earthy Salts, and Lime Water.

### Preparations.

**SPIRITUS AMMONIÆ AROMATICUS.** Sp. Sal Volatile. Sp. g. ·870. Colourless.

Carbonate of Ammonia, 8 oz.; Strong Solution of Ammonia, 4 oz.; Volatile Oil of Nutmeg, 4 drms.; Oil of Lemon, 6 drms.; Rectified Spirit, 6 pints (= 120 ozs.); Water, 3 pints (= 60 ozs.); distil 7 pints (= 140 ozs.).

Or in parts, thus:—16, 8, 1, 1½, 240, 120; distil 280.

This is a great improvement on the London Pharmacopœia process; it contains a larger quantity of Carbonate of Ammonia, and does not change in colour by keeping; moreover, it has a most agreeable flavour, and is in a preferable form for antacid.

A domestic remedy for nervous headache, combined with Spirit of Chloroform.

*Dose.*—20 to 60 minims in Camphor Water; for children, 3 mins.

(U.S. a *mixture*, Belg. a *mixture*, Fr. with *distillation*, all with Carbonate. Belg. Dan. Ger. and Russ. have Liq. Ammon. Anisat., a mixture of Oil of Anise, Spirit, Liq. Ammon., but in different proportions. Not in Austr.)

Contained in Tinctura Guaiaci Ammoniata, Tinctura Valerianæ Ammoniata.

### Not Official.

Liquor Volatilis Cornu Cervi, or Spirit of Hartshorn.—Saturated Solution of Carbonate of Ammonia of the old Pharmacopœias, distilled from Hartshorn.

Hartshorn and Oil.—3 of Sp. Hartshorn and 4 of Oil of Almonds: mix.

## AMMONIÆ CITRATIS LIQUOR.

SOLUTION OF CITRATE OF AMMONIA.

Citrate of Ammonia, $3NH_4.C_6H_5O_7$, eq. 243, dissolved in Water. Colourless.

Strong Solution of Ammonia, 2¾, or a sufficiency; Citric Acid, 3; Distilled Water, 20: dissolve the Acid in the Water, and add the Ammonia until the liquid is neutral to test-papers.

*Dose.*—2 to 6 fluid drms.; for children ½ to 1 drm.

(Not in other Pharmacopœias.)

## AMMONIÆ LIQUOR FORTIOR.

STRONG SOLUTION OF AMMONIA.

Contains 32·5 per cent. of Ammoniacal Gas, $NH_3$, eq. 17, dissolved in Water.

*Test.*—Sp. g. ·891. 52·3 grains by weight require for neutralization 1000 grain-measures of the volumetric solution of Oxalic Acid. When diluted with four times its volume of Distilled Water, it does not give precipitates with solution of Lime, Oxalate or Sulphide of Ammonium, or Ammonio-Sulphate of Copper, and when treated with an excess of Nitric Acid is not rendered turbid by Nitrate of Silver or by Chloride of Barium—indicating freedom from carbonates, lime, metals, sulphides, chlorides, and sulphates.

1 fluid drachm contains 15·83 grains of Ammonia $NH_3$.

(U.S. sp. g. ·900, 26 per cent.; Belg. Ammonia Liquida, ·935, 17 per cent.; Fr. Ammoniaque Liquide, ·920; see also Liquor Ammoniæ.)

Contained in Linimentum Camphoræ Compositum.

Best given in the more diluted state, as in Liq. Ammoniæ.

### Preparations.

**LIQUOR AMMONIÆ.** SOLUTION OF AMMONIA. Sp. g. ·959. Colourless.

Strong Solution of Ammonia, 1; Water, 2; mix. Contains 10 per cent. by weight of Ammonia, $NH_3$.

1 fluid drachm contains 5·2 grains of Ammonia $NH_3$.

(Austr. Dan. Ger. Russ. and U.S. (10 per cent.) sp. g. ·960; Belg. Fr. and U.S. see Ammon. Liq. Fort.)

### *Medicinal Properties.*

Stimulant, antacid, and antispasmodic; relieves nervous headache, and is useful in pneumonia, bronchitis, and dyspepsia. Counteracts the after-effects of alcohol and delirium tremens. Stimulant in low states of the system, as typhoid forms of fever. Externally (applied to the nostrils) in syncope; an excellent application to the sting of a wasp or the bite of an adder. On the skin it is a powerful rubefacient, and as an embrocation a counter-irritant in pains and stiffness of joints, &c.

Dr. Halford injected 30 minims of Liquid Ammonia into the veins for snake bites; the operation requires great care, using a six-minim syringe. It should only be used in almost hopeless cases.

*Dose.*—10 to 20 minims in some bland fluid. Dr. Tyler Smith injected into the vein of the right arm 8 minims with 24 minims of Water, when the patient was sinking from puerperal fever, and she recovered. Half an ounce swallowed by mistake caused death by suffocation.

**LINIMENTUM AMMONIÆ.** A semi-solid cream.

Solution of Ammonia, 1; Olive Oil, 3; mix. = (1 in 4).

A counter-irritant.

(Dan. and Russ. 1 and 3; Austr. and Ger. 1 and 4; Belg. 1 and 9 also Port. 1 and 4; all with Olive Oil: Fr. 1 and 9 Almond Oil; all are by weight. U.S. Ammonia (sp. g. ·960) 1 fl. oz., Olive Oil 2 troy ounces.)

Not Official.

TINCT. AMMON. COMP.—EAU DE LUCE.—Mastic, 2 drs.; Rectified Spirit, 9 drs.; Ol. Lavand. 14 min.; Strong Liquor Ammoniæ, 20 oz.: dissolve. Stimulant, antispasmodic.

*Dose.*—5 to 10 minims in Water.

LOTIO CRINALIS.—Ol. Amygdal., 1 oz.; Liq. Ammon. Fort., 1 oz.; Sp. Rosmar., 4 oz.; Aq. Mellis, 2 oz.; mix.

## SPIRITUS AMMONIÆ FŒTIDUS.

FETID SPIRIT OF AMMONIA.

Colourless when first made; becomes yellow by keeping.

Strong Solution of Ammonia, 2; Assafœtida in small pieces, 1½; Rectified Spirit, a sufficiency; macerate the Assafœtida in 15 of Spirit twenty-four hours, distil, add the Ammonia to the distillate, and make up with Spirit to 20.

*Medicinal Properties.*

Stimulant, antispasmodic, combined with Ammoniacum Mixture excellent for catarrh and asthma of old people.

*Dose.*—½ to 1 drachm.

(Not in other Pharmacopœias.)

INCOMPATIBLES.—Acids, and Acidulous Salts.

Not Official.

HAUSTUS AMMONIACI FŒTIDUS.—Fetid Spirit of Ammonia, 15 mins.; Ammoniacum Mixture, 1½ oz.—*St. Bartholomew's.*

## AMMONIÆ NITRAS.

NITRATE OF AMMONIA.

$NH_4NO_3$, eq. 80.

A white deliquescent salt, in confused crystalline masses, having a bitter acrid taste.

It fuses at a temperature of 320° F., and at 350° to 450° it is entirely resolved into Nitrous Oxide Gas, $N_2O$, and the vapour of water.

Solubility, 4 in 3 of Water; 1 in 11 of Spirit.

Nitrous Oxide Gas is inhaled for producing insensibility, and is much employed by dentists.

*Test.*—A solution of one part in eight parts of Distilled Water gives no precipitate with solution of Nitrate of Silver or of Chloride of Barium—indicating absence of Chlorides and Sulphates.

(U.S. and Russ.; not in others.)

## AMMONIÆ PHOSPHAS.

### PHOSPHATE OF AMMONIA.

$(NH_4)_2HPO_4$, eq. 132.

In colourless transparent prisms, which, upon exposure to air, lose Water and Ammonia, and become opaque.

Solubility, 1 in 2 of Water; insoluble in Rectified Spirit.

*Test.*—If 20 grains be dissolved in Water, and solution of Ammonio-sulphate of Magnesia be added, a crystalline precipitate falls, which, when well washed upon a filter with solution of Ammonia diluted with an equal volume of Water, dried, and heated to redness, leaves 16·8 grains. The crystalline precipitate is the Ammonio-phosphate of Magnesia, and when this is heated to redness the Ammonia is driven off, and the Pyro-phosphate of Magnesia is left.

### *Medicinal Properties.*

Diaphoretic and discutient. Given in gout and rheumatism to render the urates of Soda and Lime in the urine soluble. Of great value in cases of Uric Acid calculus.

*Is a powerful stimulant of the liver. It does not stimulate the intestinal glands.—Dr. Rutherford.*

*Dose.*—5 to 20 grains 3 or 4 times a day in Water.

(Belg.; Ger. and Russ., Ammonium Phosphoricum; not in others.)

Should not be prescribed in too condensed a form when tinctures form part of the mixture, on account of its sparing solubility in spirituous menstrua.

## AMYGDALA AMARA.

### BITTER ALMOND.

The seed of the bitter almond tree, *Amygdalus communis, var. amara*, brought chiefly from Mogadore.

Introduced only for expressing the oil from it. Yields from 42 to 44 per cent.

### Not Official.

Mistura Amygdalæ Amaræ.—Made in the same proportions as Mistura Amygdalæ.

Useful in cough, and as a lotion to allay itching of the skin. It was a favourite vehicle for giving Tartarated Antimony, in doses of ⅛ grain, to subdue inflammatory action of the lungs and relieve cough. The mixture contains a variable amount of Prussic Acid.

*Dose.* ½ to 1½ oz.

# AMYGDALA DULCIS.

SWEET ALMOND.

The seed of the sweet almond tree, *Amygdalus communis, var. dulcis*, cultivated about Malaga.

*Test.*—Not bitter nor evolving the odour of Bitter Almonds when bruised with Water.

*Medicinal Properties.*

Demulcent; useful in catarrhal affections. Dr. Pavy prescribes, as a substitute for bread or starchy food for diabetic patients, biscuits made of Jordan and Valencia Almonds, and these are made by Mr. Blatchley, of 167, Oxford Street.

(Both Bitter and Sweet Almonds are contained in all the Pharmacopœias.)

## Preparations.

**MISTURA AMYGDALÆ.** Like milk.

Compound Powder of Almonds, 1; Distilled Water, 8: triturate and strain.

A vehicle for cough medicines.

*Dose.*—1 to 2 oz.

(U.S.; Austr. Belg. Dan. Fr. and Ger., Emulsio; there is much variation in the proportions.)

**OLEUM AMYGDALÆ.** Pale yellow.

The oil obtained by pressure from either Bitter or Sweet Almonds.

*Dose.*—2 to 4 drms.

(In all the Pharmacopœias.)

1 oz. Oil, with ½ oz. Mucilage, ¼ oz. Sugar, and 6 oz. of Distilled Water, makes a nice cough mixture.

Contained in Unguentum Cetacei and Unguentum Simplex. Used in preference to Olive Oil, as it makes a whiter ointment.

A mixture of equal parts of this Oil and Lime Water, scented with Lemon, is sold for Glycerine and Lime Juice.

**PULVIS AMYGDALÆ COMPOSITUS.** A pale straw-coloured coarse powder.

Blanched Sweet Almonds, 8; Refined Sugar, 4; Gum Acacia, 1; rub the almonds into a paste, then add the sugar and gum previously mixed; rub lightly together, and pass through a coarse sieve.

*Dose.*—60 to 120 grains.

(Not in other Pharmacopœias.)

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# AMYL NITRIS.

NITRITE OF AMYL.

$C_5H_{11}NO_2$, eq. 117.

Produced by the action of Nitric or Nitrous Acid on Amylic Alcohol.

Various writers have pointed out the importance of purifying the Amylic Alcohol, until it has a constant boiling point 132° C., previous to using it. Also that the impure Nitrite of Amyl obtained should be washed with Caustic Soda to remove Prussic Acid and other free Acids, and finally rectified over fused Carbonate of Potash to get rid of the Water, reserving the portion which distils over between 95° and 100° C. = 212° F. for medicinal use.

Almost insoluble in Water. Freely soluble in Rectified Spirit, Ether, and Chloroform.

*Characters and Tests.*—An ethereal liquid of a yellowish colour, and peculiar, not disagreeable odour. Specific gravity, 0·877. Boiling point, 205° F. If it be added drop by drop to Caustic Potash while fused by the application of heat, Valerianate of Potash will be formed.

### *Medicinal Properties.*

Anodyne, useful in asthma, nervous headache, and for angina pectoris. There are glass tubes sold, each containing 4 grains of Nitrite of Amyl. A restorative in cases of defective breathing, or the heart's want of power after Chloroform; has been found useful as an antidote to Strychnia.

Employed successfully in cases of sea-sickness.—*Lancet*, May 3, 10, 24, 1879.

*Dose.*—By inhalation, the vapour of 2 to 5 minims; to be used with caution.

(Russ. sp. g. ·900; not in other Pharmacopœias.)

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## AMYLUM.

### STARCH.

Starch procured from the seeds of common wheat. In white columnar masses, which when boiled with water and cooled become blue on adding a solution of Iodine. The blue disappears on boiling.

### *Medicinal Properties.*

A good application to the face and hands when affected by cutaneous eruptions. In the form of Violet Powder, which is merely scented Starch, it is useful to prevent the low inflammation that may be caused by the chafing of the skin of fat infants. Applied also in cases of inflamed veins. It has been given in powder for Diarrhœa.

(In all the Pharmacopœias; Fr. Amidon.)

### Preparations.

**GLYCERINUM AMYLI.** Plasma. An opaque, soft-solid jelly. Keeps well.

Starch, 1; Glycerine, 8; rub them well together, then heat the mixture gradually to 240° F., constantly stirring until a translucent jelly is formed. (By weight 1 in 11, by measure 1 in 9).

(Fr. Glycéré d'Amidon, and Austr. Ung. Glycerini, Starch 1, Glycerine 15; Russ. Ung. Glycerini, Starch 1, Water 1, Glycerine 14; Dan. and Ger., Starch 2, Water 1, Glycerine 10.)

**MUCILAGO AMYLI.**

Starch, 120 grains; Distilled Water, 10 fluid ounces; boil with stirring, for a few minutes. =(1 grain in 40 minims).

Used in enemas, either in large quantity, as a vehicle for purgatives, or in small quantity for sedatives or astringents, which are to be retained and absorbed. As an enema *per se*, it is soothing and slightly astringent, and is useful in typhoid fever, when the object is rather to regulate than arrest the diarrhœa. It is used extensively to stiffen bandages for fractures, &c.

(Belg. Decoctum, 1 in 25; Fr. Lavement avec l'amidon, 1 in 35; Russ. Decoctum, 1 in 49; not in others.)

### Not Official.

AMYLUM IODATUM, *Belg.*—Iodine, 1; Starch, 10; Alcohol, 10. Dissolve the Iodine in the Alcohol; mix gradually the Starch by rubbing in a glass mortar; moisten the mixture with a little cold Water, place it in a bolt-head surrounded with hot Water, for two or three hours, shaking occasionally; when cold, wash with weak Alcohol, and dry with a gentle heat.

Dr. A. Buchanan gives Iodine 24 grains, Starch 1 oz.: triturate the Iodine with a little Water, gradually adding the Starch, continuing the trituration until the compound assumes a blue and almost black colour, dry carefully with a gentle heat, and keep in a stoppered bottle. A teaspoonful in Water thrice daily for Lupus Erythematodes.—*B. M. Journal*, May 1, 1880.

## ANETHI FRUCTUS.

### DILL FRUIT.

The fruit of the *Anethum graveolens* (an annual), cultivated in Britain or imported from Central and Southern Europe.

### *Medicinal Properties.*

Stimulant, aromatic, and carminative: chiefly given to children in cases of flatulency, or hiccough.

(Fr. Aneth; not in others.)

### Preparations.

**AQUA ANETHI.**

Bruised Fruit, 1; Water, 20; distil, 10. =(1 in 10).

(Not in other Pharmacopœias.)

*Dose.*—½ to 1 oz.; for children, 60 minims.

A vehicle to cover the taste of Soda Salts.

**OLEUM ANETHI.** Pale straw-colour.

The oil distilled in Britain from the fruit. Yield, 2·8 to 3 per cent. Sp. g. about ·900.

Readily soluble in Alcohol and Ether.

*Dose.*—1 to 4 minims, on Sugar.

(Not in other Pharmacopœias.)

## ANISI OLEUM.

### OIL OF ANISE.

The oil distilled in Europe from the fruit of *Pimpinella Anisum* (yields 2 per cent.), or distilled in China from the fruit of *Illicium Anisatum*, Star Anise (yields 4 to 5 per cent.), and imported.

*Test.*—Concretes at 50° F. Is colourless and highly refractive. Sp. g. about ·980.

*Medicinal Properties.*

Stimulant, aromatic, and carminative, slightly expectorant; used to relieve flatulence, and to diminish the griping of purgative medicines.

*Dose.*—1 to 4 minims, on sugar.

(In all the Pharmacopœias.)

Contained in Tinctura Camphoræ Comp. and Tinctura Opii Ammoniata.

**ESSENTIA ANISI.** Colourless.

Oil of Anise, 1; Rectified Spirit, 4; mix. =(1 in 5).

(U.S. Spiritus, 1 in 16; not in other Pharmacopœias.)

*Dose.*—10 to 20 minims.

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## ANTHEMIDIS FLORES.

### CHAMOMILE FLOWERS.

The dried flower-heads of *Anthemis nobilis*, (perennial) single and double, wild and cultivated.

*Medicinal Properties.*

Tonic, aromatic, and stomachic. In large doses, emetic. The infusion taken early every morning is useful in atonic dyspepsia.

(In all the Pharmacopœias.)

### Preparations.

**EXTRACTUM ANTHEMIDIS.** Deep brown.

Chamomile Flowers, 1 lb.; Oil of Chamomile, 15 minims; Distilled Water, a gallon; boil the Chamomile in the Water till the volume is reduced to one-half, then strain, press, and filter; evaporate the filtered liquor by a water bath to a pill consistence, adding the Oil of Chamomile at the end of the process.

*Dose.*—2 to 10 grains.

(Fr., Camomille; Belg. Dan. and Russ., Chamomillæ; Ger., with Spirit; not in Austr. or U.S.)

**INFUSUM ANTHEMIDIS.**

Chamomile Flowers, ½; boiling distilled Water, 10; infuse for fifteen minutes. =(1 in 20).

*Dose.*—As a stomachic, 1 to 3 oz.; as an emetic, 5 to 10 oz.

(U.S. 1 in 32; Fr. 1 in 200; not in others.)

**OLEUM ANTHEMIDIS.** Greenish at first, and changes to yellow.

Distilled in Britain from the flowers. Sp. g. ·905—·915.

1 cwt. of flower-heads yields about 1½ oz. Essential Oil.

*Dose.*—2 to 4 minims.

(In all the Pharmacopœias except Austr. and U.S.)

Stimulant and carminative. Prescribed in pills with Rhubarb or other powder.

Not Official.

## ANTIMONIUM.

ANTIMONY.

**Sb**, eq. 122.

Of a silvery-white colour, brittle and crystalline. Sp. g. 6·7.

This metal rarely occurs native, but generally as the black sulphuret (Sulphide), the Stibium of the ancients. It was first made known in the metallic state by Basil Valentine towards the end of the fifteenth century. It is prepared on the large scale by roasting the sulphuret (mixed with charcoal to prevent caking) until it is converted into oxide, which is then reduced by means of Charcoal and Carbonate of Potash. It is extensively employed in the manufacture of type-metal and the alloy known as Britannia metal. It melts at about 800° F., and as the ingot cools, its surface has a beautiful stellated appearance: the alchemist considered this star as a mysterious guide to the secrets of transmutation. It is volatile at a white heat.

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## ANTIMONII OXIDUM.

OXIDE OF ANTIMONY.

$Sb_2O_3$, eq. 292.

A greyish-white powder, fusible at a low red heat.

Prepared by decomposing a solution of Chloride of Antimony with Carbonate of Soda.

*Test.*—Does not yield any sublimate when fused in a test-tube; dissolves entirely when boiled with an excess of Acid Tartrate of Potash —indicating absence of Arsenic, and other oxides of Antimony.

### *Medicinal Properties.*

Diaphoretic. Less active than the tartrate.

*Dose.*—1 to 3 grs. in a pill.

(Belg. Dan. (Stibicum Oxidum) Fr. and U.S.; not in others.)

### Preparation.

**PULVIS ANTIMONIALIS.** A white powder.

Oxide of Antimony, 1; Phosphate of Lime, 2; mix. =(1 in 3).

*Dose.*—2 to 6 grs.

(Same as Fr. Poudre Antimoniale de James; Belg. by calcination; not in others.)

The following analysis was made by Robert Scott, of Dublin, of a very old packet of James's Fever Powder (bearing Messrs. Newbery's name) for the British Pharmacopœia Committee:—

| | | |
|---|---|---|
| Soluble in Water— | Antimonite of Lime . | ·095 |
| | Sulphate of Lime . . | ·267 |
| | Alkaline Salts . . | ·220 |

| | | |
|---|---|---|
| Insoluble in Water— | Antimonious Acid | 33.216 |
| | Teroxide of Antimony | ·601 |
| | Phosphate of Lime | 62·124 |
| | Lime | 1·954 |
| | Residue | 1·603 |
| | Loss | ·502 |
| | | 100·000 |

## ANTIMONII CHLORIDI LIQUOR.

SOLUTION OF CHLORIDE OF ANTIMONY.

Chloride of Antimony, $SbCl_3$, eq. 228·5, dissolved in Hydrochloric Acid.

Prepared by boiling Black Sulphide of Antimony in Hydrochloric Acid. A yellowish-red liquor; introduced chiefly for the purpose of preparing the Oxide of Antimony.

*Test.*—Sp. g. 1·470. 1 fluid drm., mixed with a solution of ¼ oz. of Tartaric Acid in 4 oz. of Water, forms a clear solution, which, if treated with Sulphuretted Hydrogen, gives an orange precipitate, weighing, when washed and dried at 212° F., at least 22 grs.

### *Medicinal Properties.*

A caustic; it usually acts without causing much pain or inflammation, and after the separation of the eschar forms a clean healthy ulcer. Sometimes applied to cancerous growths. Never used internally.

(Belg. sp. g. 1·40; Dan. sp. g. 1·44; Fr.; Russ. sp. g. 1·34; not in others.)

Antidote.—Magnesia, Carbonate of Soda.

## ANTIMONIUM NIGRUM.

BLACK ANTIMONY.

*Syn.* Prepared Sulphuret of Antimony.

Native Sulphide of Antimony, $Sb_2S_3$, eq. 340, purified from Siliceous matter by fusion, and afterwards reduced to fine powder.

Dissolves almost entirely in boiling Hydrochloric Acid, evolving Sulphuretted Hydrogen.

Used only to prepare Sulphuretted Hydrogen, and to make Antimonium Sulphuratum and Liquor Antimonii Chloridi.

## ANTIMONIUM SULPHURATUM.

SULPHURATED ANTIMONY.

*Syn.* Antimonii Oxysulphuretum; Antimonii Sulphuretum Aureum; Antimonii Sulphuretum Præcipitatum.

Sulphide of Antimony, $Sb_2S_3$, with a small and variable amount of Oxide of Antimony, $Sb_2O_3$.

A bright orange or golden-red powder, without odour and with a slight taste.

Insoluble in Water; dissolves readily in Caustic Soda, also in Hydrochloric Acid.

*Test.*—60 grains dissolved in Hydrochloric Acid, and dropped into Water, give a white precipitate, which, when washed and dried, weighs about 53 grains (Oxychloride of Antimony). When heated with 12 times its weight of Hydrochloric Acid it is nearly all dissolved, with the evolution of Sulphuretted Hydrogen. Exposed to heat, it takes fire, and burns with a greenish-blue flame, giving off Sulphurous Acid Gas; the metal remains as a greyish oxide.

### *Medicinal Properties.*

Alterative, diaphoretic, and emetic; uncertain in action from its slight solubility, depending on the acidity of the stomach. Usually prescribed with Calomel and Guaiacum, as in Pilula Hydrargyri Subchloridi Composita, for secondary syphilis and cutaneous eruptions; or with Henbane or Hemlock in chronic rheumatism.

*Dose.*—1 to 5 grs. in pill.

(U.S. Antimonium Sulphuratum; Austr. Belg. Ger. and Russ., Stibium Sulphuratum Aurantiacum.)

Contained in Pilula Hydrargyri Subchloridi Composita.

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## ANTIMONIUM TARTARATUM.

TARTARATED ANTIMONY. TARTAR EMETIC.

Tartrate of Antimony and Potash, $KSbC_4H_4O_7H_2O$, eq. 343.

In colourless transparent crystals, exhibiting triangular facets.

Solubility, 1 in 20 of cold Water; 1 in 2 of Boiling Water; partially soluble in Proof Spirit; insoluble in Alcohol.

*Test.*—20 grs. dissolve without residue in a fluid ounce of Distilled Water at 60° F., and the solution gives with Sulphuretted Hydrogen an orange precipitate which, when washed and dried at 212° F., weighs 9·91 grs. (Golden Sulphuret of Antimony.)

### *Medicinal Properties.*

Diaphoretic, expectorant, depressant, and emetic. Given with Sal Volatile, or Bitter Almond Emulsion, is less likely to produce nausea. Relieves the chest in pneumonia and in bronchitis. In continued small doses it relaxes, and causes increased secretion from the mucous membranes and skin, and is a *depressant* to the whole vascular system.

As a febrifuge, it is given either in aqueous solution, or as Vinum. In repeated small doses it is used in midwifery in cases of rigidity of the os uteri, or heat and dryness of the passages.

Externally, in the form of ointment, it acts as a powerful irritant to the skin, producing a pustular eruption. Is used as a counter-irritant for children: it should, however, be applied with great caution, both on account of its highly irritant properties, and its liability to be absorbed into the system.

*Dose.*—As a diaphoretic, $\frac{1}{16}$ to $\frac{1}{6}$ gr.; as a depressant, $\frac{1}{6}$ to 1 gr.; as an emetic, 1 to 2 grs.

(Austr. Kalium Stibio-Tartaricum; Belg. Tartras Potassæ et Antimonii; Dan. Tartras Stibico-Kalicus; Fr. Tartrate de Potasse et d'Antimoine; Ger. Tartarus Stibiatus; Russ. Stibio-Kali Tartaricum; U.S. Antimonii et Potassii Tartras.)

INCOMPATIBLES.—Gallic and Tannic Acids, the Alkalies, and Lead Salts. Astringent infusions, as Bark, Rhubarb, &c.

ANTIDOTES.—In case of poisoning by Tartar Emetic, the antidotes are, Tannic Acid, Catechu, vegetable astringents.

## Preparations.

**UNGUENTUM ANTIMONII TARTARATI.** White.

Tartarated Antimony in fine powder, 1; Simple Ointment, 4; mix. =(1 in 5).

(U.S. Ung. Antimonii; Austr. Ung. Autenriethi; Ger. Ung. Tartari Stibiati; Russ. Ung. Stibio-Kali Tartarici; all 1 in 5. Fr. Pommade Stibiée, 1 in 4; Belg. Ung. Tartari Stibiati, 1 in 6·6.)

**VINUM ANTIMONIALE.** Pale yellowish-brown.

Tartarated Antimony, 2 grs.; Sherry, 1 oz. =(1 in 219).

*Note.*—The Tartarated Antimony does not dissolve in the Sherry readily; it is better to dissolve it in about ten times its weight of hot Water, and then add the Wine.

Each fluid drachm contains $\frac{1}{4}$ grain.

*Dose.*—5 to 30 minims as a diaphoretic, in saline mixtures combined with Mindererus Spirit to relieve cough. 2 mins. for a child one year old.

(In all the Pharmacopœias; U.S. Vinum Antimonii, 1 in 228; Dan. and Ger. Vinum Stibiatum, 1 in 250; all with Sherry. Austr. V. Stibiato-Tartaricum, 1 in 250; Belg. V. Antimoniatum, 1 in 200; Fr. Vin Émétique, 1 in 300; Russ. V. Stibio-Kali Tartarici, 1 in 240; all with Malaga Wine.)

# AQUA.

## WATER.*

The Pharmacopœia orders the purest Water that can be obtained, cleared, if necessary, by filtration. It must be remembered that water obtained in different localities varies much in respect to its purity, and that the earthy and saline matters *actually dissolved* in it cannot be separated by filtration alone.

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* One cannot resist expressing a few thoughts on this all-important fluid, without which all animal and vegetable life must cease. Water exists in the liquid, solid, and gaseous states, and on one or other of these we mainly depend for our mechanical power and our mode of travelling by sea and by rail. Its beauty is shown in the clouds, the rainbow, the dew, hoar-frost, crystals of snow, and the glaciers. Water

The purest water is from the Wenham Lake ice and the Norwegian ice. After these may be taken Distilled Water and snow-water. Rain-water contains about a millionth part of Ammonia, and probably about the same amount of Chloride of Sodium. The following table will show how great a difference exists in the quantity of Lime and saline matters dissolved in various natural waters :—

| | | | |
|---|---|---|---|
| Loch Katrine, supplying Glasgow, | contains | 2 | grs. in the gallon. |
| River Dee „ Aberdeen | „ | 4 | „ |
| „ Tay „ Perth | „ | 5 | „ |
| Water supplied to Liverpool | „ | 5 | „ |
| Claremont Water | „ | 5·7 | „ |
| Farnham, in Surrey | „ | 7·25 | „ |
| Thames, supplying London | „ | 19 to 22 | „ according to locality. |
| Water supplied to Watford | „ | 22·75 | „ |
| Spring Water | „ | 40 to 60 | „ |
| River Jordan | „ | 75 | „ |
| „ after 3 weeks' rain | „ | 65 | „ |
| Sea-water, shores of the Baltic | „ | 1100 | „ |
| „ Firth of Forth | „ | 2100 | „ |
| „ off Boulogne | „ | 2240 | „ |
| „ German Ocean | „ | 2380 | „ |
| „ open Atlantic, Canaries | „ | 2450 | „ |
| „ English Channel, near Havre | | 2520 | „ |
| „ Bay of Biscay, Bayonne | „ | 2660 | „ |
| „ Mediterranean, Marseilles | „ | 2870 | „ |
| Dead Sea Water (sp. gr. 1·211) | | 17200 (Marcet). | |
| „ after 3 weeks' rain (sp. gr. 1·180 Squire). | | | |

Professor Clark, of Aberdeen, invented a soap test, made by dissolving 1 oz. of white curd soap in one gallon of Proof Spirit, to ascertain the amount of Lime in Water; and proposed a method of softening all waters impregnated with Carbonate of Lime held in solution by Carbonic Acid, by adding so much lime-water as is capable of uniting with the Carbonic Acid. The whole of the Carbonate of Lime in the water, as well as that produced by the action of the Carbonic Acid upon the lime-water added, is precipitated, leaving the water comparatively pure. By this process three-fourths of the hardness of Thames water are removed; and the water which rises at Watford from the Chalk is reduced by Clark's process from 18 degrees of hardness to 2 or 3 degrees. Care, however, must be taken not to add more lime-water than is just sufficient for the purpose, otherwise this agent will con-

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is endowed with the remarkable property of being at its greatest density at the temperature of 39·5° F., so that ice at 32° F. floats upon it, and aquatic life is preserved in the coldest winter.

Twenty-five measured ounces at 212° become 24 at 60° F., and 23¾ at 39·5° F., its greatest density.

The pressure of the atmosphere will support 36 feet of Water, and a Water Barometer was erected in the Royal Society's House, by Professor Daniel, and 3000 hourly observations were made, comparing it with the Standard and the Mountain Barometers, and it was found uniformly to be an hour in precession of them in the changes. R. S. Trans. 1832.

A Glycerine Barometer is now in use at Printing House Square, and the markings are reported in the *Times*, 323 inches of the Glycerine Barometer being equal to 30·35 inches of the Mercurial Barometer.

taminate the water. For further particulars the reader is referred to the *Pharmaceutical Journal*, vol. vi. p. 526.

The Thames water, when supplied for long voyages, after being kept in tanks about four months, undergoes a kind of fermentation, which lasts for a few weeks, and after this change the water becomes bright, pleasant to drink, and will keep for months or years without further change, a property which belongs to scarcely any other river water.

Attention has been drawn to the contamination of drinking waters by the infiltration of sewage; and several wells, previously esteemed for the brilliancy and cool taste of the water, have since been abandoned as being totally unfit for drinking or culinary purposes.

**AQUA DESTILLATA.** $H_2O$, eq. 18.

Purest water distilled through a block-tin worm, rejecting the first portion that comes over, and distilling only three-fourths of the whole.

Distilled water has, when freshly drawn, an unpleasant odour, which is removed by passing it through a charcoal filter, or by exposing it to air, but Carbonic Acid is in that case absorbed by it, and Subacetate of Lead will then render it milky. If water is distilled through leaden pipes, it becomes impregnated with lead; the same is the case with natural soft water passing through leaden pipes. The royal buckhounds were poisoned at Ascot from this cause. Zinc wire reaching the whole length of the column of water so impregnated displaces the Lead. Water containing Sulphate of Lime seems less likely to become impregnated with Lead than that containing the Chlorides.

The transparency and colour of Distilled Water should not be affected by Lime Water, Hydrosulphuric Acid, Chloride of Barium, and Oxalate of Ammonia, nor by Nitrate of Silver, when fresh drawn.

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The waters of the British Pharmacopœia, which are all distilled, except Aq. Camphoræ and Aq. Chloroformi, are as follows; the formulæ are given under the names of the substances from which they are prepared.

| | |
|---|---|
| AQUA ANETHI. From the dried fruit. | Dose, ½ to 1 oz. |
| AQUA AURANTII FLORIS. From the flowers. Imported. | ½ to 1 oz. |
| AQUA CAMPHORÆ. (Formerly Mistura Camphoræ.) | 1 to 2 oz. |
| AQUA CARUI. From the dried fruit. | 1 to 2 oz. |
| AQUA CHLOROFORMI. | ½ to 2 oz. |
| AQUA CINNAMOMI. From the bark. | ½ to 1 oz. |
| AQUA DESTILLATA. | |
| AQUA FŒNICULI. From the dried fruit. | 1 to 2 oz. |
| AQUA LAUROCERASI. From fresh leaves. | 5 to 30 min. |
| AQUA MENTHÆ PIPERITÆ. With oil and distilled. | 1 to 2 oz. |
| AQUA MENTHÆ VIRIDIS. With oil and distilled. | 1 to 2 oz. |
| AQUA PIMENTÆ. From the dried unripe berries. | 1 to 2 oz. |
| AQUA ROSÆ. From the fresh petals. | ½ to 1 oz. |
| AQUA SAMBUCI. From the fresh flowers. | ½ to 1 oz. |

It was thought proper in former Pharmacopœias to add spirit to the several distilled Medicated Waters, to preserve them from change, but

Mr. Warrington has shown, by experiment, that this is an error. He kept bottles of Dill and Anise Waters with and without spirit for two years, and found that those without spirit kept well, whilst those with spirit had become acidified by the spirit changing into Acetic Acid.

Not Official.

## ARAROBA.

*Syn.* Goa Powder, Chrysarobine, Poh di Bahia.

Is obtained from a tree of the order Leguminosæ, growing in the province of Bahia (Brazil); it is found in the clefts of the wood. It contains about eighty per cent. of Chrysarobine.

An ointment is made of the Araroba Powder by heating together over a water bath 1 or 2 drachms with 1 oz. of Lard, and stirring till cold. Chrysophanic Acid (page 10) was first used by Balmanno Squire, and his formula in the Skin Hospital Pharmacopœia is 2 drms. of the Acid and 1 oz. Lard, heat together over a water bath for half an hour, and when set mix with a pestle and mortar.

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## ARECA.

### ARECA NUT.

The seed of the Areca Catechu, Linn., the betel-nut tree. Imported from the East Indies. A remedy for tape-worm. A paste is also made of the powder for a dentifrice.

(Br. Ph. *Dose*—½ to ¾ oz.)

60 grains of powdered Areca Nut made into a ball with Honey answers well as a vermifuge for a large dog.

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Not Official.

## ARGENTUM.

### SILVER.

### Ag, eq. 108.

A white, malleable, ductile, and tenacious metal, bears a brilliant polish, and is soft when pure. Sp. g. 10·5; fuses at between 1800° and 1900° F. It was one of the earliest known metals, the Luna or Diana of the alchemists. It occurs native, sometimes arborescent, sometimes in masses; it is seldom, however, pure. The mines of Peru and Mexico are the richest. The mines of Saxony, Bohemia, Swabia, and Kongsberg in Norway, are the richest in Europe. It has been found in Cornwall and Devonshire as a sulphuret.

Silver is readily acted on by Sulphuretted Hydrogen.

Soluble in Nitric Acid, and precipitated by Hydrochloric Acid.

## ARGENTI NITRAS.

NITRATE OF SILVER. LUNAR CAUSTIC.

**$AgNO_3$, eq. 170.**

In colourless tabular right rhombic prisms, or in white cylindrical rods.

Solubility, 100 grains in 50 minims of Water, measuring 80 minims; 1 in 15 of Rectified Spirit.

*Test.*—10 grains dissolved in 2 fluid drachms of Distilled Water give, with Hydrochloric Acid, a curdy white precipitate (Chloride of Silver), which, when washed and thoroughly dried, weighs 8·44 grains—indicating the proper amount of metal. The filtrate, when evaporated by a water bath, leaves no residue—indicating absence of impurities. Nitrate of Silver may be adulterated with Nitrate of Soda or Potash, and these, of course, will remain after the Chloride of Silver has been precipitated and removed.

### *Medicinal Properties.*

Tonic and antispasmodic. It is considered a reliable remedy in epilepsy, though its *modus operandi* is not perfectly understood. It is said to produce most good in this disease when it acts upon the bowels. It is useful in cholera and angina pectoris, as well as in chronic diseases of the stomach accompanied with pain and vomiting. 1 gr. in pill has been given three times a day for six or eight weeks, for ulceration of the stomach, with great success. In typhoid fever, for inflammation and ulceration of the ileum, in pills, dose $\frac{1}{4}$ to $\frac{1}{2}$ grain; if diarrhœa be the principal symptom, an injection of 3 or 4 grains to 6 fluid ounces of Water is useful to promote cicatrization of internal ulcers. The discoloration of the skin occasioned by its use is first indicated by a dark line on the edges of the gums. This is said to be removed by a steady course of Acid Tartrate of Potash. Points are applied externally to poisoned wounds, pustules, ulcers, and erysipelatous inflammations, also to uterine polypi; 2 to 4 grains to the ounce is employed for lotions or injections, or as a collyrium for ulcers of the cornea and aphthous affections of the mouth: it is an excellent application for sore nipples. Sir G. D. Gibb employed 30 to 40 grains to the ounce to inject on the larynx; 10 grains to the ounce are used to sponge a relaxed throat, or 20 grains to the ounce for diphtheria, and for favus.

Swollen chilblains are sometimes painted with a strong solution of Nitrate of Silver.

Strong Solution of Iodide of Potassium, or Cyanide of Potassium, will remove the black stains on the skin produced by Nitrate of Silver.

*Dose.*—$\frac{1}{8}$ to $\frac{1}{3}$ gr. or more. Prescribed in pills with crumb of bread.

$\frac{1}{80}$ gr. 3 times a day is a good nerve tonic.

(In all the Pharmacopœias.)

INCOMPATIBLES.—The Alkalies and their Carbonates, the Chlorides, and all Acids (except Nitric and Acetic); Iodide of Potassium, Solutions of Arsenic, and astringent infusions.

Antidotes.—In cases of poisoning by Nitrate of Silver, the antidote is solution of Common Salt, given in some demulcent drink.

### Not Official.

Lotio Argenti Nitratis Etherea. *London Hospital.*—Nitrate of Silver, 20 grs.; Distilled Water, 1 drm.; Sp. Nitrous Ether to 1 oz.

Lotio Argenti Nitratis Fortis. *Fever Hospital.*—Nitrate of Silver, 60 grs.; Distilled Water, 1 oz.: dissolve.

Mild Caustic Points, made by fusing Nitrate of Potash in various proportions with Nitrate of Silver, are used by oculists and others; thus—

No. 1 consists of 1 Nitrate of Silver and 2 of Nitrate of Potash.*
2 ,, 1 ,, 3 ,,
3 ,, 1 ,, 3½ ,,
4 ,, 1 ,, 4 ,

## ARGENTI OXIDUM.

OXIDE OF SILVER.

$Ag_2O$, eq. 232.

An olive-brown powder, insoluble in Water, but soluble in Nitric Acid.

*Test.*—When heated to redness, 116 parts leave 108 of pure Silver. It is dissolved by Nitric Acid, and precipitated by Chloride of Sodium; the supernatant liquor ought not to be discoloured by Sulphide of Ammonium—indicating absence of copper.

### *Medicinal Properties.*

It has the general therapeutic qualities of the Nitrate, without its escharotic effect, and, as it is said, without discolouring the skin. A valuable astringent in hemorrhages.

*Dose.*—½ to 2 grs. in form of pill.

(U.S.; not in other Pharmacopœias.)

If prescribed with Creasote or with the Chlorides in pills, the Oxide must be first diffused through some simple powder, or the heat produced in rapidly reducing the Silver or Chlorine combining with it, causes the mass to become red-hot, or to explode.

## ARGENTUM PURIFICATUM.

REFINED SILVER.

*Test.*—If Ammonia be added in excess to a solution of the metal in Nitric Acid, the resulting solution exhibits neither colour nor turbidity. Used only to prepare Nitrate of Silver.

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* This is called in Austr. and Germ. Ph. Argent. Nitr. c. Kali Nitrico; in the Dan. and Russ. Arg. Nitr. bis mitigatum. Russ. has also Arg. Nit. mitigatum, Nitrates of Silver and Potash equal parts.

# ARMORACIÆ RADIX.

## HORSERADISH ROOT.

The fresh root of the *Cochlearia Armoracia,* (perennial), cultivated in Britain.

Its virtues are taken up by Water and Alcohol. When distilled with Alcohol, it yields none of the oil. The root may be kept fresh for some time if buried in sand and in a cool place.

### *Medicinal Properties.*

It is highly stimulant, exciting the stomach, and promoting the secretions, especially that of urine. Used in atonic dyspepsia; also as a sudorific in chronic rheumatism. The infusion is used as a gargle for aphonia.

(Belg.; Dan.; Fr. Raifort; not in others.)

### Preparation.

**SPIRITUS ARMORACIÆ COMPOSITUS.** Colourless.

Fresh Root sliced, 20; dried Orange Peel, 20; Nutmeg, bruised, ½; Proof Spirit, 160; Water, 40; mix, and distil over 160. =(1 in 8).

*Dose.*—1 to 3 drms.

(Not in other Pharmacopœias; Fr. Teinture de Raifort Comp. and Belg. Tinct. Raphani Comp. differ widely from the above.)

### Not Official.

INFUSUM COMPOSITUM.—Fresh Root, sliced, 1; Black Mustard Seed, 1; Compound Spirit of Horse-radish, 1; boiling Distilled Water, 20: macerate two hours; strain, and add the spirit.

*Dose.*—1 to 2 oz. as a warm stimulant. Used also as a gargle for aphonia.

It is found in practice that a temperature of 150° to 180° F. makes the strongest infusion.

Aconite Root has been mistaken for this root, which seems incredible, unless we reflect that country people are in the habit of putting into the ground again Horseradish that has been scraped until only the crown and a remnant of the root vanishing to a point remain, resembling the tap-root of Aconite.

# ARNICÆ RADIX.

## ARNICA ROOT.

The rhizome and rootlets of the *Arnica montana,* (perennial), or Leopard's Bane, dried; collected in the mountainous parts of Central and Southern Europe.

### *Medicinal Properties.*

Stimulant, acting on the brain and the whole nervous system; irritant to the stomach and bowels; peculiarly useful in diseases attended with a debilitated or typhoid state of the system. Used externally for bruises and wounds, and after extraction of teeth to allay pain.

(Austr. and Fr., root, leaves, and flowers; Belg. Germ. and Russ., root and flowers; Dan. and U.S., flowers.)

### Preparation.

**TINCTURA ARNICÆ.** Pale greenish yellow, and having a characteristic odour.

Bruised Root, 1; Rectified Spirit to percolate 20; macerate forty-eight hours with 15 of the spirit, agitating occasionally; pack in a percolator, and when it ceases to drop, pour on the remaining spirit, let it drain, wash the marc, press, filter, and make up to 20.
=(1 in 20).

*Dose.*—1 to 2 drms.

(U.S., 1 and 4·4; Belg. and Fr., 1 and 5; Dan. Ger. and Russ., 1 and 10; all from flowers: Russ., 1 and 5, from the root; Austr., 1 and 5·5, from root, leaves, and flowers, mixed; all are by weight.)

Used externally, it should be mixed with an equal quantity of hot water, and applied with lint.

Symptoms of poisoning by Arnica are violent vomiting, intense headache, diarrhœa, colic, depression of pulse.

ANTIDOTES.—Opium, Morphia.

### Not Official.

ARNICA OPODELDOC.—White Soap, 4; Rectified Spirit, 10; Tincture of Arnica, 5; Camphor, 1. Dissolve by heat, and strain.

Not Official.

## ARSENICUM.

ARSENIC.

As, eq. 75.

A bluish-grey metal, of great brilliancy, quickly tarnishing on exposure. It has a sp. g. of 5·7 to 5·9, and volatilizes at 356° F., its fumes having the odour of garlic.

It is found in most countries, usually combined with other metals. Its oxide is also a natural production, though chiefly found in the flues of furnaces in which various metallic ores are roasted.

*See* ACIDUM ARSENIOSUM.

## ASSAFŒTIDA.

ASSAFŒTIDA.

The gum resin exuded from the incised living root of the *Narthex Assafœtida* (*Ferula Narthex*). Procured in Afghanistan and the Punjaub. Imported from Bombay.

It yields all its virtues to alcohol, and forms a clear tincture, which becomes milky on the addition of water.

### *Medicinal Properties.*

It is a moderate stimulant, a powerful antispasmodic, an efficient expectorant, and feeble laxative. Useful in cases of flatulency in the bowels, in hysteric paroxysms, and other kinds of nervous affections; also in some forms of chronic bronchitis.

Was recommended by the late Mr. Worms for the Cattle Plague.

*Dose.*—5 to 20 grs.

(In all the Pharmacopœias.)

Contained in Pilula Aloes et Assafœtidæ.

### Preparations.

**ENEMA ASSAFŒTIDÆ.**

Assafœtida, 30 grs.; Water, 4 oz.; rub the Assafœtida with the Water added gradually so as to form an emulsion, for one enema.

(Not in other Pharmacopœias.)

**PILULA ALOES ET ASSAFŒTIDÆ,** 1 in 4. *See* ALOES.

**PILULA ASSAFŒTIDÆ COMPOSITA.** *Syn.* PIL. GALBANI COMP. Dark brown.

Assafœtida, 2; Galbanum, 2; Myrrh, 2; Treacle by weight, 1; melt together in a water bath.

= (Assaf. and Galb., of each, 1 in 3½).

*Dose.*—5 to 10 grs.

(U.S.—Assafœtida 3, Soap 1; Belg. (Pil. Fœtida) Assafœtida 2, Galbanum 1, in 4; not in others.)

**SPIRITUS AMMONIÆ FŒTIDUS,** 38 grs. in 1 oz. *See* AMMONIA.

**TINCTURA ASSAFŒTIDÆ.** Deep reddish brown.

Assafœtida (small fragments), 1; Rectified Spirit, 8; macerate seven days, strain, filter, and add spirit to make 8. = (1 in 8).

*Dose.*—½ drm. to 1 drm.

(U.S. 1 and 6; Belg. Dan. Fr. Ger. and Russ., 1 and 5; all by weight.)

Prescribed with Aromatic Spirit of Ammonia, or with Mucilage, as the resin separates when mixed with Water only. Alone or with Tincture of Valerian and Hyoscyamus, in flatulent hysteria.

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## ATROPIA.

### ATROPIA.

An alkaloid, in colourless acicular crystals, $C_{17}H_{23}NO_3$, eq. 289, obtained from Belladonna.

Solubility, 1 in 500 of Water; 1 in 8 of Rectified Spirit; 1 in 20 of Ether.

*Test.*—Its solution in water is alkaline, and gives a citron-yellow precipitate with Chloride of Gold. Leaves no ash when burnt with free access of air.

### *Medicinal Properties.*

For external use only. Like Belladonna, it dilates the pupil of the eye. The Unguentum Atropiæ is a much cleaner preparation than Unguentum Belladonnæ.

(Belg. Dan. Fr. Ger. Russ. and U.S.; not in Austr.)

Antidotes.—In case of poisoning by Atropia, the antidotes are the same as for Belladonna.

### Preparations.

**LIQUOR ATROPIÆ.** Colourless.

Atropia, 4 grs.; Rectified Spirit, 1 drm.; dissolve and add Water, 7 drms.; mix. = (1 grain in 120 minims).

Each drachm contains half a grain.

*Dose.*—1 minim.

(In no other Pharmacopœia.)

This quantity of spirit causes pain when applied to the eyes, but a smaller quantity hardly holds the Atropia in solution. The Sulphate dissolves without the aid of spirit. Neither this solution nor that of the Sulphate keeps long without some change.

**UNGUENTUM ATROPIÆ.** Cream colour.

Atropia, 8 grs.; Rectified Spirit, ½ drm.; Lard, 1 oz.: dissolve the Atropia in the spirit, and mix with the lard. =(1 to 60).

30 grains of Ointment = ½ grain of Atropia, may be used at one application.
(In no other Pharmacopœia.)

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## ATROPIÆ SULPHAS.

### SULPHATE OF ATROPIA.

A white powder, which leaves no residue when burned with free access of air. Its solution in water should not redden blue Litmus paper; and should give a white precipitate with Chloride of Barium.

Solubility, 1 in 4 of Water.

(Austr. Dan. Fr. Ger. Russ. and U.S.; not in Belg.)

**LIQUOR ATROPIÆ SULPHATIS.** Colourless.

Sulphate of Atropia, 4 grs.; Distilled Water, 1 oz.: dissolve.

*Dose.*—1 to 2 minims = $\frac{1}{120}$th to $\frac{1}{60}$th of a grain of Sulphate of Atropia.

The same dose may be subcutaneously injected.

More suitable for ophthalmic use, being free from spirit.

The solutions of Atropia are very prone to change, and should therefore be always made at the time required. The sulphate dissolves the instant it is put into the water. The Atropia requires the aid of spirit for its solution.

### Not Official.

Atropine Paper and Atropine Gelatine, in books proposed by Mr. Streatfield and in bottles of discs by Mr. Ernest Hart, are extensively used by oculists to dilate the pupil of the eye—a small square or disc being introduced between the eye and the lower lid.

Injection of Atropia and Morphia. *See* Morphiæ Acetas.

# AURANTII FLORIS AQUA.

## ORANGE-FLOWER WATER.

The distilled water of the flowers of the Bitter Orange tree, *Citrus Bigaradia*, and of the Sweet Orange tree, *Citrus Aurantium;* prepared mostly in France.

*Test.*—Not coloured by Sulphuretted Hydrogen—indicating absence of Lead.

### *Medicinal Properties.*

A mild tonic, but chiefly used as a flavouring vehicle.

*Dose.*—½ to 1 oz.

(Austr.; Belg.; Dan.; U.S.; Fr. Eau Distillée de Fleur d'Oranger; Ger. and Russ., Aqua Florum Aurantii and Aqua destillata, equal parts.)

### Preparation.

**SYRUPUS AURANTII FLORIS.** Colourless.

Orange-flower Water, 8; Refined Sugar, 48; Distilled Water, 16, or a sufficiency; heat the sugar and water together, strain, and when nearly cold, add the orange-flower water. When finished, should weigh 72 oz. and measure 54 oz. Sp. g. 1·330.

*Dose.*—1 to 2 drms.

(Belg., Fr., and U.S. Orange Flower water 5, sugar 9·5; Ger. and Russ. Orange Flower water 5, sugar 9; all by weight; not in Austr. or Dan.)

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# AURANTII CORTEX.

## BITTER-ORANGE PEEL.

The outer part of the rind of the ripe fruit of the *Citrus Bigaradia*, fresh and dried. Imported from the south of Europe.

### *Medicinal Properties.*

It is a mild tonic, carminative and stomachic; a useful addition to bitter Infusions and some Decoctions.

(In all the Pharmacopœias.)

### Preparations.

**INFUSUM AURANTII.**

Dried Bitter Orange Peel, cut small, 1; boiling Water, 20: infuse for fifteen minutes and strain. =(1 in 20).

*Dose.*—1 to 2 oz.

(Not in other Pharmacopœias.)

**INFUSUM AURANTII COMPOSITUM.**

Dried Bitter Orange Peel, cut small, ½ oz.; Fresh Lemon Peel, 120 grs.; Cloves, bruised, 60 grs.; boiling Water, 20 oz.: infuse for fifteen minutes and strain. =(1 in 40).

*Dose.*—1 to 2 oz.

(Not in other Pharmacopœias.)

**SYRUPUS AURANTII.** Straw-colour, not quite bright. Keeps well.

Tincture of Orange Peel, 1; Syrup, 7: mix. =(1 in 8).

*Dose.*—1 to 2 drms.

(U.S. Sweet peel, spirit, water, and sugar; Dan. and Belg. peel, water, and sugar; Ger. and Russ. peel, wine, and sugar; Austr. peel, weak spirit, sugar, and tincture; Fr. peel, spirit, water, and sugar; also fresh orange juice, and sugar.)

**TINCTURA AURANTII.** Pale brown, but deepens by age.

Dried Bitter Orange Peel, cut small and bruised, 1; Proof Spirit, 10; macerate for seven days in a close vessel with occasional agitation, then strain, press, and filter; add sufficient Proof Spirit to make 10. =(1 in 10).

*Dose.*—1 to 2 drms.

It is much prescribed with mineral acids, but should not be prescribed with nitro-hydrochloric acid, as this acid contains free chlorine and destroys the flavour of the orange; prescribed with Quinia in tonic mixtures.

(Austr. Belg. Dan. Fr. Ger. and Russ. 1 and 5; U.S. 1 in 7; all by weight.)

**TINCTURA AURANTII RECENTIS.**

The thin yellow and fresh rind of Bitter Orange, 6 oz.; Rectified Spirit, 20 oz.; digest for 7 days; strain, press, and filter.

*Dose.*—1 to 2 drms.

(Fr. fresh peel 1, alcohol 6.)

**VINUM AURANTII.** Light brown.

Wine made in Britain; it is, in fact, the Orange Wine sold in the shops of grocers and others, containing about 12 per cent. of Alcohol and some free acid.

Introduced to prepare Quinine Wine, also Vinum Ferri Citratis.

## BALSAMUM CANADENSE.

*See* TEREBINTHINA CANADENSIS.

Not Official.

## BALSAMUM DIPTEROCARPI.

GURJUN BALSAM, OR WOOD OIL.

### *Medicinal Properties.*

Dr. Dougall used 1 part Gurjun Balsam with three parts of Lime Water to anoint the body night and morning, cleaning the body before the morning application, first with dry earth and then with water. He gave 2 drachms of the Balsam internally night and morning, mixed with Lime Water, for Leprosy. *Lancet*, May 16, 1874. Mr. J. D. Hillis, of the Leper Asylum in British Guiana, is greatly in favour of it. *Lancet*, April 24, 1880. It is also applied for Eczema.

# BALSAMUM PERUVIANUM.

## BALSAM OF PERU.

A Balsam obtained from *Myroxylon Pereiræ* (*Myrospermum* of Sonsonate). It exudes from the trunk of the tree after the bark has been scorched and removed. From San Salvador, in Central America.

A reddish-brown or nearly black liquid, translucent in thin films, having a characteristic odour and bitter taste. Sp. g. 1·14—1·16.

Soluble in equal parts of Rectified Spirit. Not diminished in volume when mixed with water.

Balsam of Peru contains Cinnamic and Benzoic Acids, both of which possess antiseptic properties.

### *Medicinal Properties.*

A warm and stimulating tonic and expectorant. Useful in chronic catarrh, asthma, and other pectoral complaints, and in rheumatism; also to restrain excessive discharges, as gleets, &c. Externally for chronic indolent ulcers and for sore nipples.

*Dose.*—10 to 15 minims as an emulsion with mucilage or sugar and yolk of egg with water.

(In all the Pharmacopœias.)

**Not Official.**

UNGUENTUM.—Balsam, 1; Lard, 7.

An excellent application for sore nipples or cracked lips.

UNG. B. PERUV. RESINOSUM.—Balsam, 1; Resin Ointment, 1: mix. Applied upon cotton wool for bedridden sores.

# BALSAMUM TOLUTANUM.

## BALSAM OF TOLU.

A Balsam obtained from *Myroxylon Toluifera.* It exudes from the trunk of the tree after incisions have been made in the bark. From Tolu, New Granada.

A soft solid, of a brownish colour and aromatic balsamic odour.

Entirely dissolved by alcohol.

### *Medicinal Properties.*

Similar to those of the Balsam of Peru. Lozenges good for cough.

*Dose.*—10 to 20 grs., in the form of emulsion, with mucilage and sugar.

(In all the Pharmacopœias except Austr.)

Contained in Tinctura Benzoini Composita.

### Preparation.

**SYRUPUS TOLUTANUS.** Colourless, slightly opaque. Keeps well.

Balsam of Tolu, 1¼; Sugar, 32; Water, 20; boil the balsam with the water in a lightly covered vessel half an hour, stirring occasionally, and adding water when required; when cold, make up to 16; filter, add the sugar, and dissolve. When finished, weighs 48 and measures 36. Sp. g. 1·330. =(1 in 28⅘).

*Dose.*—1 to 2 drms., in cough mixtures.

(Belg. Fr. Russ.; the following are made with Tincture:—Belg. (extemporaneous); Dan.; U.S.; not in Austr. and Ger.)

**TINCTURA TOLUTANA.** Pale brown. Deepens by age.

Balsam of Tolu, 1; Rectified Spirit, 8: dissolve, filter, and make up to 8. =(1 in 8).

*Dose.*—15 to 30 minims, mixed with mucilage or syrup.

(U.S. 1 in 8·4; Dan. Fr. and Belg. 1 and 5; all by weight; not in Austr. Ger. and Russ.)

## BEBERIÆ SULPHAS.

### SULPHATE OF BEBERIA.

$C_{35}H_{40}N_2O_6H_2SO_4$, eq. 682.

The Sulphate of an alkaloid obtained from the bark of the *Nectandra Rodiæi* (Bebeeru), the Greenheart tree, growing in British Guiana. In dark-brown thin translucent scales, yellow when in powder, with a strong bitter taste.

Solubility, 1 in 80 of water; sparingly in Spirit.

It will also dissolve 1 in 1 of water, and the solution can be diluted up to 1 and 8 of water, but on further dilution it precipitates.

*Test.*—Entirely destructible by heat. Water forms with it a clear brown solution. The solution soon spoils by keeping.

### *Medicinal Properties.*

Tonic and antiperiodic, an imperfect substitute for quinia; sometimes given in menorrhagia.

*Dose.*—1 to 3 grs. as a tonic; 5 to 10 grs. as an antiperiodic.

(Not in other Pharmacopœias.)

INCOMPATIBLES.—Alkalies and their Carbonates, Bromide and Iodide of Potassium, Lime Water, Tartaric Acid, and Tartrates, Astringent Infusions and Tinctures.

## BELÆ FRUCTUS.

### BAEL FRUIT.

The half-ripe fruit of *Ægle Marmelos,* dried; from Malabar and Coromandel.

In fragments, with a brownish-orange dried pulp adhering to the rind.

Sir Joseph Fayrer advises the use of fresh Bael Fruit in the form of Bael Sherbet, as used in India.—*Med. Times and Gazette,* Dec. 23, 1877.

Sir Joseph Fayrer had a few of the fresh fruits sent over, very carefully packed; they arrived in excellent condition. A confection was made of these by the Author; it had the aroma, and the flavour so much prized in India.

A supply of fresh fruits has been regularly received from February to June in 1880 and 1881, and the confection constantly supplied. Dose.—A teaspoonful.

### *Medicinal Properties.*

Has been much extolled for diarrhœa and dysentery, and is given in combination with Syrup of Red Gum or other astringents.

### Preparation.

**EXTRACTUM BELÆ LIQUIDUM.** Intense brown.

Bael, 1; Distilled Water, 15; Rectified Spirit, ⅛: macerate for twelve hours in 5 of the water, pour off the liquid, repeat the operation twice for one hour. Press, filter, evaporate to ⅞, and add the spirit, making 1.

A fluid ounce is equal to a solid ounce.

*Dose.*—1 to 2 drms.

(Not in other Pharmacopœias.)

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## BELLADONNA.

### DEADLY NIGHTSHADE.

### HERB.

The fresh leaves and the branches to which they are attached; also the leaves separated from the branches, carefully dried, of the *Atropa Belladonna* (perennial); gathered in June, when the fruit has begun to form, from wild or cultivated plants in Britain.

### *Medicinal Properties.*

Belladonna causes dryness of the throat, is a powerful narcotic, possesses diaphoretic and diuretic properties, and is exceedingly valuable in convulsions, neuralgia, whooping cough, paralysis, and diseases having their seat chiefly in the nervous system. Dr. Nunnely successfully treated habitual constipation by giving ⅛ to ½ grain of Extract on rising in the morning, which rarely failed to produce a healthy stool after breakfast; and, by continuing its use for a week or fortnight, it restored the natural action of the bowels. For nocturnal incontinence of urine, dose 5 to 10 minims of the Tincture, with the same dose of Tinct. of Perchloride of Iron three times a day. (*Lancet*, Oct. 22, 1870.) In loss of tone and irritable state of the generative organs, giving rise to nocturnal emissions, although it has slightly aphrodisiacal properties. For treatment of typhoid fever, see *Medical Times*, Feb. 5, 1870.

The Extract, given in 1-grain doses, relieves rheumatism. As a prophylactic, 10 grains dissolved in 6 ounces of water; dose a teaspoonful.

For external use the liniment of the root is the cleanest and most effective.

(Belg. and U.S. leaves, fresh and dried; Ger. leaves and branches; Austr. leaves and herb; Fr. leaves and fruit.)

Incompatibles.—Caustic Alkalies, Opium, Strychnia.

Antidotes.—In cases of poisoning by Belladonna, the antidotes are, an emetic of 10 grs. of Sulphate of Copper; and afterwards Opium should be administered in ortion required to counteract the effects of the Belladonna. Chlora. *Lancet*, p. 74, Jan. 8, and p. 589, Oct. 1, 1881. Pilocarpine, *Brit. Med.* 594, April 16, 1881.

## Preparations.

**TRUM BELLADONNÆ.** Intense olive.

ıct of Belladonna, 3; Resin Plaster, 3; Rectified Spirit, 6; rub 'act and spirit together in a mortar, and when the insoluble has subsided, decant the clear solution, remove the spirit by ion or evaporation, and mix the alcoholic extract thus obtained ɜ resin plaster melted by the heat of a water bath, continuing t until with constant stirring the plaster has acquired a suitable nce: yields only 3½ of plaster.

ore 3 of Extract produce only ½ Alcoholic Extract, and this with 3 of ıster is too soft to use; if Pitch Plaster, however, is substituted, it makes ›od consistence, or if absolute Alcohol is employed for the Extract, in the Rectified Spirit, the same result is obtained.

ıld be spread with a moderately warm iron.

ıthor, who has suffered much from lumbago, has long since abandoned na plasters: he finds the Linimentum Belladonnæ Compositum, used as answers perfectly.

[.S. (Alcoholic Extr. of) Root 1, Resin Plaster 2; Belg. with Extract and "Oil of Belladonna by infusion;" with powder of the leaves, Ger. 1 in 4, and Russ. 1 in 3·6; Fr. Alcoholic Extract (Leaves) 3 in 4; not in others.)

**TUM BELLADONNÆ.** Black.

112 lbs. of fresh leaves and tender branches, bruise in a stone or suitable apparatus, and press out the juice, heat it gradually , separate the green colouring matter by a calico filter, heat ained liquor to 200° F. to coagulate the albumen, and again ɜvaporate the filtrate by a water bath to the consistency of a thin then add to it the green colouring matter previously separated, rring the whole together assiduously, continue the evaporation nperature not exceeding 140°, until the extract is of a suitable ›nce for forming pills.

ı. of herb yield 56 lbs. of juice = nearly 4 lbs. extract (viz. 63 oz.).
ı. leaves, when dried, weigh 16 lbs.

-¼ to ½ gr., gradually increased to 1 or 2 grs. 1 gr. given in a pill for sm.

Belg. with clear juice of the herb evaporated and mixed with the powder of the same, so that the whole can be reduced to powder,—also an extract of the herb with fæculæ evaporated to dryness,—also an aqueous extract from the dried root, and alcoholic extracts from the herb and from the seeds; Dan. made from leaves with weak spirit; Ger. made with water and spirit from leaves and flowering branches; Russ. made from leaves with water and spirit: Fr. clarified juice from leaves evaporated, also alcoholic from the herb and from the seeds; U.S. nearly the same as Br.,—also an alcoholic extract from the powder of the leaf, and a liquid extract of the root; Austr. alcoholic from the dried root.)

**BELLADONNÆ.**

ıly expressed juice, 3; Rectified Spirit, 1; mix; after 7 days To be kept cool.

-5 to 15 mins.

**TINCTURA BELLADONNÆ.** Intense brown.

The dried leaves in coarse powder, 1; Proof Spirit, 20: macerate forty-eight hours in 15 of the spirit, agitating occasionally; pack in a percolator, and when it ceases to drop, add the remaining spirit, let it drain, press the marc; filter and make up with proof spirit to 20. =(1 in 20).

60 minims may be considered about equal in therapeutical strength to 1 gr. of the extract.

*Dose.*—From 5 to 20 minims.

(Dried leaves,—Fr. 1 and 5; U.S. 1 and 7; Russ. 1 and 10; Dried herb,—Belg. 1 and 5; Dried root,—Austr. 1 and 5; Fresh leaves,—Fr. and Belg. 1 and 1; Ger. 1 and 1·2; all by weight.)

**UNGUENTUM BELLADONNÆ.** Dusky brown.

Extract of Belladonna, 80 grs.; rub with a few drops of water, and add Lard, 1 oz.: mix thoroughly. =(about 1 in 6½).

This is not a clean application; it is used to allay irritation of the bladder, by rubbing it upon the perinæum; ½ to 1 drm. of Liniment of Belladonna to 1 oz. of Lard answers as well, and does not colour the skin.

(U.S. 1 in 8; Fr. and Ger. 1 in 10; Russ. 1 in 11; all with extract; Belg. dried leaves, about 1 in 5; not in Austr. and Dan.)

## ROOT.

The dried root of the plant collected in early spring, cultivated in Britain or imported.

(In all the Pharmacopœias. U.S. roots from plants more than two years old.)

### Preparations.

**LINIMENTUM BELLADONNÆ.** Light reddish-brown.

The powdered root, 20; Camphor, 1; Rectified Spirit, 20: moisten the root for three days with part of the spirit, then pack in a percolator, and add sufficient spirit to produce, with the camphor, 20. A fluid ounce is equal to a solid ounce.

Four times the strength of the extract of the leaves and stalks.

Prescribed with equal parts of Soap Liniment or Compound Camphor Liniment. An excellent topical application for neuralgic pain. When an oily liniment is required, the chloroform of belladonna mixes best, as it readily dissolves in the oil.

(In no other Pharmacopœia.)

**ATROPIA.** *See* ATROPIA.

### Not Official.

CHLOROFORMUM BELLADONNÆ.—Powdered root, 20: percolate with sufficient Chloroform to produce 20. Mixes with oils, but not readily with spirituous liniments.

Applied with equal parts of camphor liniment or olive oil, for painful rheumatism: one of either of these will make a bright liniment with 3 of Eau de Cologne. It should not be applied to the nape of the neck.

LINIMENTUM BELLADONNÆ COMP.—Liniment. Belladonnæ, 7; Chloroformi Belladonnæ, 1; mix. Sprinkled on impermeable piline (not *spongio piline*), when applied to the loins in lumbago, should be firmly pressed with the hands on the part for five minutes to insure perfect contact, and should then be kept on at least 10 or 12 hours.

UPPOSITORIUM.—Extract of Belladonna, 1 gr.; Stearine, 13 grs.: mix, and form a cone for one suppository.

(U.S. ½ gr. Alcoholic Extract of Belladonna in each suppository.)

## BENZOINUM.

### BENZOIN.

The Balsamic resin exuded from incisions made in the bark of the *yrax Benzoin*, a native of Sumatra, Java, Borneo, Laos, and Siam.

There are several qualities of Benzoin in the market; two, however, chiefly used in medicine, one agglutinated tears, the other a com- ct mass consisting of a rich brown resin with more or less of tears it. Imported from Siam and Sumatra, that from Siam being the rer and having the stronger odour. Yields by sublimation 15 to per cent. of Benzoic Acid.

Solubility: the tears wholly soluble in Rectified Spirit, and in Solu- n of Potash. The mass contains impurities, which are left after ating it with Alcohol.

*Medicinal Properties.*

Stimulant, expectorant, styptic, used in making aromatic pastilles.

*ose.*—10 to 30 grs., rarely given in powder.

(In all the Pharmacopœias.)

**Preparations.**

**IDUM BENZOICUM.** *See* ACIDUM BENZOICUM.

**EPS BENZOATUS,** 10 grs. to 1 oz. *See* ADEPS.

**ICTURA BENZOINI COMPOSITA.** Intense reddish-brown. FRIAR'S BALSAM. RAUMATIC BALSAM.

Benzoin, 8; prepared Storax, 6; Balsam of Tolu, 2; Socotrine oes, 1½ (less $\frac{1}{40}$th);* Rectified Spirit, 80: macerate seven days, er, and wash the marc with spirit to make up 80. =(1 in 10).

*ose.*—½ to 1 drm., triturated with mucilage or yolk of egg.

(Belg.; Dan.; Fr.; U.S.; not in Austr. Ger. and Russ.)

*Medicinal Properties.*

Internally given for chronic cough.

Applied externally to languid ulcers, cuts, or wounds.

**Not Official.**

INCTURA BENZOINI.—Benzoin, 1; Rectified Spirit, 10: dissolve and strain.

(Austr. Dan. Fr. Ger. and Russ. 1 and 5; Belg. 1 in 5; U.S. about 1 in 4; all by weight.)

OTIO BENZOINI.—A nice lotion to protect the face from the heat of the sun is de with Tincture of Benzoin, 1; Rose Water, 40.

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* To be exact, 16½ grains are to be taken from every 1½ oz. of Aloes.

Not Official.

## BETULA ALBA.

COMMON EUROPEAN BIRCH.

**Oleum.**—Gives the odour to Russia leather; has been used for chronic eczema.

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## BISMUTHUM.

BISMUTH.

**Bi,** eq. 210.

As met with in commerce, is generally impure.

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## BISMUTHUM PURIFICATUM.

Sp. g. 9·83; fuses at 507° F. A crystalline metal of a greyish-white colour, with a distinct roseate tinge; dissolved in a mixture of equal volumes of Nitric Acid and Distilled Water, it forms a solution which, by evaporation, yields colourless crystals that are decomposed on the addition of water, giving a white precipitate. If the mother-liquor from which the crystals have been separated be added to Solution of Carbonate of Ammonia, the precipitate formed and the solution are free, or nearly free, from colour, indicating absence of Copper and Iron.

Employed for the preparations of Bismuth.

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## BISMUTHI CARBONAS.

CARBONATE OF BISMUTH.

**$2(Bi_2CO_5)$. $H_2O$,** eq. 1042.

A white powder; blackened by Sulphuretted Hydrogen, insoluble in Water, soluble with effervescence in Nitric Acid; when added to Sulphuric Acid, coloured with Sulphate of Indigo, the colour of the latter is not discharged, indicating absence of Nitrates; if to Nitric Acid, mixed with half its volume of Distilled Water, as much Carbonate of Bismuth be added as the Acid will dissolve, one volume of this solution poured into 20 volumes of water will yield a white precipitate. The Nitric Acid Solution gives no precipitate with Diluted Sulphuric Acid or with Solution of Nitrate of Silver, indicating absence of Lead and Chlorides.

### *Medicinal Properties.*

Similar to the Subnitrate, and often preferred to it.

*Dose.*—5 to 20 grs.
(U.S.)

The following prescription is a good one for pyrosis:—

Bismuthi Carbonatis, 2 drms.; Magnes. Carb. levis, 1 drm.; Pulv. Tragac. ver., 20 grs.; Aq. Flor. Aurant., Syr. ejusdem, āā 2 drms.; Aquæ ad 6 oz.

*Dose.*—3 to 4 teaspoonfuls 3 times a day after meals.

Should this be made of double strength it will solidify.

If Acacia Gum be used instead of Tragacanth, it will settle as a hard mass in the bottle.

The Light Carb. Magnesia is added to prevent its setting hard.

Not Official.

## BISMUTHI NITRAS.

In colourless transparent crystals. Very sparingly soluble in water. Soluble in Glycerine, but is slowly deposited from the solution when water is added. 10 grs. dissolved cold in an ounce of Glycerine have been used in skin diseases.—*Medical Times*, December 9, 1876.

It forms with Sulphuric Acid diluted with an equal bulk of water a solution which is blackened by Sulphate of Iron, showing the presence of Nitric Acid.

## BISMUTHI SUBNITRAS.

*Syn.* WHITE BISMUTH, NITRATE OF BISMUTH, MAGISTERY OF BISMUTH.

$BiNO_4.H_2O$, eq. 306.

A heavy white powder in minute crystalline scales.

Insoluble in water.

*Test.*—It dissolves in Nitric Acid, diluted with half a volume of Distilled Water, without effervescence, and is not precipitated by Diluted Sulphuric Acid, or solution of Nitrate of Silver—indicating absence of Lead and Chlorides. When mixed with Diluted Sulphuric Acid in excess, and subjected to Marsh's test, it yields no Arsenic, or merely a trace.

### *Medicinal Properties.*

It is highly useful in pyrosis, some forms of vomiting and irritative dyspepsia; also in diarrhœa; like Iron it blackens the excretions. When the powder is prescribed in mixture, it should be suspended in Mucilage of Tragacanth. *See* BISMUTHI CARBONAS.

Externally it is used as a cosmetic, but is more or less blackened by an impure atmosphere; and in lotion for some chronic skin diseases.

*Dose.*—5 to 15 grs. in pill at meals.

(Belg. Subnitras Bismuthi; Dan. Subnitras Bismuthicus; Fr. Sous-nitrate de Bismuth; Austr. and Ger. Bismuthum Sub-nitricum; Russ. Bismuthum Nitricum præcipitatum; U.S. Bismuthi Subnitras.)

INCOMPATIBLES.—Potash, Soda, Ammonia, and their Carbonates.

### Preparations.

**LIQUOR BISMUTHI ET AMMONIÆ CITRATIS.** Colourless.

Purified Bismuth, 1; Nitric Acid, 2; Citric Acid, 2; Solution of Ammonia, a sufficiency; mix the Nitric Acid with half its volume of distilled water, and add the Bismuth in successive portions. When effervescence has ceased, apply for ten minutes a heat approaching that of ebullition, and decant the solution from any insoluble matter. Evaporate the solution until it is reduced to 2, then add the Citric Acid previously dissolved in 4 of distilled water, and afterwards the solution of Ammonia in small quantities at a time, until the precipitate formed is redissolved and the solution is neutral or slightly alkaline to test-paper: dilute with distilled water to the volume of 20.

*Test.*—Three fluid drachms mixed with an ounce of distilled water, and treated with Sulphuretted Hydrogen in excess, yield a black precipitate which, collected, washed, and dried, weighs 9·9 grains.

Sp. g. 1·122. One fluid drachm contains 3 grs. of Oxide of Bismuth.

*Dose.*—½ to 1 drm.

**TROCHISCI BISMUTHI.** White.

White Bismuth, 3¼ oz. and 18 grs.; Carbonate of Magnesia, 4 oz.: precipitated Carbonate of Lime, 6 oz.; Sugar, 29 oz.; Gum Arabic, 1 oz.; Mucilage, 2 oz.; Rose Water, a sufficiency; make 720 lozenges.

Each lozenge contains 2 grains of Subnitrate of Bismuth.

*Dose.*—1 to 6 lozenges.

(Fr. Tablettes, 1½ gr. in each; not in others.)

Not Official.

UNGUENTUM.—Subnitrate of Bismuth, 1; Simple Ointment, 4.

LOTIO BISMUTHI.—Subnitrate of Bismuth, 10 grs.; Water, 1 oz.: mix. Used as a sedative lotion in cases of eczema.—*Skin Hospital.*

FERRIER'S SNUFF.—Hydrochlorate of Morphia, 2 grs.; Acacia powder, 2 drms.; Trisnitrate of Bismuth, 6 drms.—*Lancet*, April 8, 1876.

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## BISMUTHI OXIDUM.

### OXIDE OF BISMUTH.

$Bi_2O_3$, eq. 468.

Take of

| | |
|---|---|
| Subnitrate of Bismuth . . . | 1 pound = 16 ozs. |
| Solution of Soda . . . . . | 4 pints = 80 ozs. |

Mix and boil for five minutes; then, having allowed the mixture to cool and the oxide to subside, decant the supernatant liquid, wash the precipitate thoroughly with distilled water, and finally dry the oxide by the heat of a water bath.

*Characters and Tests.*—A dull lemon-yellow powder. Heated to incipient redness it is not diminished in weight. It is insoluble in water, but soluble in nitric acid mixed with half its volume of water, and if it be thus dissolved to saturation, the solution mixed with ten or twenty times its volume of water yields a white precipitate. The nitric acid solution gives no precipitate with diluted sulphuric acid, nor with solution of nitrate of silver dropped into it—indicating absence of lead and chlorides.

Solution of chloride of ammonium added to the nitric acid solution gives a white precipitate, and if this be treated with excess of solution of ammonia, then filtered, and the clear filtrate neutralized with hydrochloric acid, it will not become turbid.

*Dose.*—5 to 15 grains.

Not Official.

## BOLDO.

The leaves and young twigs of the *Peumus fragrans*, a native of Chili; has been used in liver complaints, and as a stimulant to digestion.

The activity is due to an alkaloid *Boldine*, and a volatile oil which exists in the leaves in the proportion of 2 per cent.

**TINCTURA.** Leaves, 1; Proof Spirit, 8.

Digest seven days and filter.

*Dose.*—10 to 30 mins.

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## BORAX.

BORAX.

$Na_2B_4O_7 . 10H_2O$, eq. 382.

A salt imported in a crude state from India; large quantities are also manufactured from the native Boracic Acid of Tuscany, and the native Borate of Lime of Peru.

In transparent colourless crystals, sometimes slightly effloresced.

Solubility, 1 in 22 of Water; 1 in 2 of boiling Water; 2 ounces of Borax are dissolved by 2 ounces of Glycerine, and the solution measures only 3¼ ounces. By the aid of 1 of Glycerine, 1 part of Borax will dissolve in 12 of Water. Insoluble in Rectified Spirit. Mucilage when mixed with Borax solidifies.

*Test.*—191 grains dissolved in 10 fluid ounces of distilled water require for saturation 1000 grain-measures of the volumetric solution of Oxalic Acid. Biborate of Soda is an alkaline salt, and this quantity of Oxalic Acid is required to render it neutral.

A hot saturated solution, when acidulated with any of the Mineral Acids, lets fall as it cools a scaly crystalline deposit (Boracic Acid), a solution of which in spirit burns with a green flame.

### *Medicinal Properties.*

Refrigerant and diuretic. Causes contraction of the uterus; and is combined with ergot and cinnamon water to produce expulsion of the placenta. Used as an emmenagogue. Externally in skin diseases. A saturated solution is applied with great success in pityriasis versicolor; it acts by dissolving the epidermis, and so removing the parasite.

*Dose.*—5 to 30 grains.

(In all the Pharmacopœias.)

INCOMPATIBLES.—Mineral Acids and most of their salts. Mucilage of Acacia.

### Preparations.

**GLYCERINUM BORACIS.** Colourless. Keeps well.

Borax in powder, 1; Glycerine, 4; rub together until dissolved.

(By weight 1 in 6, measure 1 in 4¾).

This is not merely a solution of Borax in Glycerine; the Glycerine splits up the biborate into free Boracic Acid and a more basic borate. It reddens Litmus paper, and effervesces on the addition of Bicarbonate of Soda.

*Dose.*—½ to 1½ drms.

(U.S. Glycer. Sodii Boratis, about 1 and 4.)

**MEL BORACIS.**

Finely powdered Borax, 1; Clarified Honey, 7. =(1 in 8).

(U.S. 1 and 8; not in others.)

Applied to aphthæ of the mouth.

A great improvement in Mel Boracis would be to dissolve 1 of Borax in 1 of Glycerine, and then add 6 of Honey.

### Not Official.

Gargarisma.—Borax, 1 drm.; Honey, 2 drms.; Water, to 4 oz.—*Consumption Hospital.*

Lotio.—Borax, 1; Rose Water, 24.

1 Borax, 1 Glycerine, 16 Rose Water.

Used as a cosmetic.

Tinctura Myrrhæ et Boracis.—Myrrh, 1; Eau de Cologne, 16; Borax, 1; Water, 3; Syrup, 3.

For the teeth and gums.

Unguentum.—Borax, 1; Simple Ointment, 8.

For chilblains or cracked nipples.

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## BROMUM.

### BROMINE.

**Br,** eq. 80.

A liquid non-metallic element, obtained from sea-water and from some saline springs.

A dark brownish-red, very volatile liquid, with a strong disagreeable odour. Sp. g. 2·966; boils at 117° F.

Solubility in water, 1 in 30 by weight, and the solution renders cold starch water yellow; if it contains Iodine, it will turn the starch water blue.

Used to prepare Ammonii Bromidum and Potassii Bromidum.

### *Medicinal Properties.*

Applied to cancer in the womb by means of lint dipped in the following mixture:—Bromine, 12 minims; Rectified Spirit, 1 drachm; using, at the same time, an injection, as follows:—Bromine, 12 minims; Rectified Spirit, 2 drachms; Water, 16 oz. Mix.

(Belg. Dan. Fr. Ger. Russ. and U.S.; not in Austr.)

### Not Official.

Acidi Bromohydrici Solutio. Dr. Fothergill gives the following formula in *Br. Med. Journal,* July 8th, 1876:—

;r. xxviii. Bromide of Potassium dissolved in 2 pints of Water; ℥ xiii. ii. Tartaric Acid in 2 pints of Water; mix the solution, and filter.

;o 60 minims in water.

ıt it prevents headache after taking Quinine or Iron, and may be given , which it readily dissolves; for nervous exhaustion.

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## BUCHU FOLIA.

### BUCHU LEAVES.

*Syn.*—Diosma.

ɔd leaves of *Barosma betulina*, *B. crenulata*, *B. serratifolia*, rom the Cape of Good Hope.

nd Alcohol extract their virtues, which probably depend on and extractive.

### *Medicinal Properties.*

;omachic, diuretic, and diaphoretic. Given chiefly in com- the urinary organs, attended with excess of uric acid, for itation of the bladder and urethra, diseases of the prostate, ion or incontinence of urine. Also in dyspepsia, chronic n, cutaneous affections, and dropsy.

to 40 grs. in powder.

. Dan. Fr. and U.S.; not in Austr. Ger. and Russ.)

### Preparations.

**BUCHU.**

ɔruised, 1; boiling Distilled Water, 20: infuse for an hour . =(1 in 20).

o 4 oz.

about 1 in 16; not in others.)

**BUCHU.** Deep greenish-brown.

ɔruised, 1; Proof Spirit, 8: macerate for forty-eight hours the spirit, pack in a percolator, and let it drain, then pour ıt of the spirit; when it ceases to drop, press and wash the r, and make up to 8. =(1 in 8).

,o 4 drms.

in other Pharmacopœias.)

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Not Official.

## BYNE.

### MALT.

**M BYNES.** Extr. Malti, Ger. Extract of Malt.

. Malt, 10; Cold Water, 10; macerate 3 hours, then add ater, temperature 150° F., 40; digest the whole at 150° F. for d strain, now bring the clear liquid to the boiling point and pass it through a flannel bag; evaporate to 10, again pass through the bag, lastly evaporate to 5.

*Dose.*—A dessert-spoonful 3 or 4 times a day, as a nutrient.

Has been used in Guy's Hospital for more than half a century.

Not Official.

## CADMIUM.

CADMIUM.

**Cd,** eq. 112.

A white metal closely resembling Tin, but harder and more tenacious. Sp. g. 8·6; fuses at 442° F. Does not readily become oxidized except when heated; the oxide is orange-coloured, not volatile, and easily reducible.

## CADMII IODIDUM.

IODIDE OF CADMIUM.

**$CdI_2$,** eq. 366.

It may be formed by direct combination of Iodine and Cadmium in the presence of water.

In flat micaceous crystals, white and of a pearly lustre, which melt at 600° F., forming an amber-coloured fluid.

Solubility: 1 in 1¼ of Water; 1 in 2 of Rectified Spirit; 1 in 3 of Glycerine.

*Test.*—Its solution gives a yellow precipitate with Sulphuretted Hydrogen. Ten grains dissolved in water, and Nitrate of Silver added in excess, give a precipitate, which, when washed first with water, and afterwards with half an ounce of Solution of Ammonia and dried, weighs 12·5 grains.

(Not in other Pharmacopœias.)

**UNGUENTUM.** Cream colour; changes by keeping.

Iodide of Cadmium, 1; Simple Ointment, 7: mix. =(1 in 8).

This may be used when the Unguentum Plumbi Iodidi is objected to, as the latter imparts a yellow colour to the skin.

Not Official.

CADMIUM SULPHURICUM. Ger. and Russ.; Cadmii Sulphas, Belg. and U.S.; Sulphate de Cadmium, Fr.; not in Austr. and Dan.

Not Official.

## CAFFEINE.

**$C_8H_{10}N_4O_2+H_2O$,** eq. 212.

Caffeine (or Theine, which is the same substance) has been obtained from Coffee, Tea, Guarana, and Paraguay tea. It crystallizes, from its aqueous solution, with one molecule of water, in fine white silky needles, which have a slightly bitter taste.

Solubility in Water, 1 in 100; in Rectified Spirit, 1 in 45; in Chloroform, 1 in 10.

*Dose.*—½ to 2 grains in solution or in pill.

CAFFEINE CITRATE, the existence of which has been disputed, is, according to Mr. Lloyd (*New Remedies*, February, 1881), a semicrystalline granular powder, which is decomposed by cold water and other solvents which dissolve Citric Acid readily and Caffeine sparingly. It is practically insoluble in cold Chloroform, although Chloroform will extract any free Caffeine that may be present.

## CAJUPUTI OLEUM.

### OIL OF CAJUPUT.

The Oil distilled from the leaves of *Melaleuca minor*, imported from Batavia and Singapore.

Very mobile, transparent, of a fine pale bluish-green colour. It has a strong, agreeable odour, and a warm, aromatic taste, and leaves a sensation of coldness in the mouth.

Solubility: entirely in Alcohol.

*Test.*—Sp. g. ·914. Dropped on water, it speedily evaporates. It burns rapidly, without leaving any residue. Copper has been found in it.

Contained in Linimentum Crotonis.

### *Medicinal Properties.*

A powerful topical and general stimulant, antispasmodic, and diaphoretic. Efficacious in dropsy, chronic rheumatism, hysteria, flatulent colic, and other spasmodic and nervous affections, and in low states of the system. Externally, diluted with Olive Oil (1 to 2), used to allay chronic rheumatism and gout pains. Applied with lint for toothache.

*Dose.*—1 to 3 minims on a lump of Sugar, or in any bland fluid.

(Belg. Dan. Fr. Ger. Russ. and U.S.; not in Austr.)

### Preparation.

**SPIRITUS CAJUPUTI.** Colourless.

Oil of Cajuput, 1; Rectified Spirit, 49; dissolve. =(1 in 50).

*Dose.*—50 to 100 minims.

(Not in other Pharmacopœias.)

Not Official.

## CALCIUM.

### CALCIUM.

**Ca**, eq. 40.

Calcium, a brilliant white combustible metal, was discovered by Sir Humphrey Davy in 1808. Sp. .g 1·5. It is the metallic base of Lime.

## CALCII CHLORIDUM.

### CHLORIDE OF CALCIUM.

$CaCl_2$, eq. 111.

Crystals fused and evaporated till they become solid, and finally dried at about 400° F. In white agglutinated masses, very deliquescent; evolves no Chlorine or Hypochlorous Acid on the addition of Hydrochloric Acid.

Solubility, 1 in 2 of Water; 1 in 4 of Rectified Spirit.

*Brit. Ph. Dose.*—10 to 20 grs.

(U.S.; Austr., Calcium Chloratum Fusum; Russ., Calcium Chloratum Siccum.)

### Not Official.

Chloride of Calcium, Muriate of Lime in Crystals.—Consists of equal weights of Water and dried Chloride of Calcium.

5 grs. of the crystals dissolved in 2 oz. of water, and a fourth part given frequently, arrests sickness when most remedies fail.

It is also given in glandular diseases.

Liq. Calcii Chloridi.—2 oz. of dried Chloride in 8 oz. Distilled Water.

*Dose.*—30 minims.

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## CALX.

### LIME.

CaO, eq. 56.

The oxide of the metal Calcium, in hard flaky masses, which, when well sprinkled with water, should crack, swell up, evolve much heat, and crumble to powder.

Solubility.—At 32° F. twenty oz. of water dissolve 13·25 grs.
60° ditto 11·2
212° ditto 6·7

*Test.*—If previously slaked, it dissolves without effervescence in Diluted Hydrochloric Acid, and if this solution be evaporated to dryness, and the residue redissolved in water, only a very scanty precipitate forms on the addition of Saccharated Solution of Lime—indicating absence of Phosphate of Lime.

(In all the Pharmacopœias.)

### Preparation.

CALCIS HYDRAS. See p. 78.

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## CALX CHLORATA.

### CHLORINATED LIME.

A product obtained by exposing Slaked Lime to the action of Chlorine Gas as long as the latter is absorbed; it possesses bleaching and disinfecting properties.

A dull white powder with a feeble odour of Chlorine, partially soluble in Water.

*Test.*—10 grains mixed with 30 grains of Iodide of Potassium, and dissolved in 4 fluid ounces of water, produce, when acidulated with 2 fluid drachms of Hydrochloric Acid, a reddish solution which requires for the discharge of its colour at least 850 grain-measures of the volumetric solution of Hyposulphite of Soda, corresponding to 30 per cent. of Chlorine liberated by Hydrochloric Acid.

In this test, the Hydrochloric Acid, acting on the Hypochlorite of Lime, liberates Chlorine, and this reacting on the Iodide of Potassium, sets free an equivalent quantity of Iodine, which, if the Chlorinated Lime be good, will require the quantity stated of solution of Hyposulphite of Soda to convert it into colourless Iodide of Sodium and Tetrathionate of Soda.

(Dan. Calx Chlorata; U.S. Calx Chlorinata; Austr. Calcium Hypochlorosum; Ger. Calcaria Chlorata; Russ. Calcaria Hypochlorosa; Belg. Chloruretum Calcis; Fr. Hypochlorite de Chaux.)

## Preparations.

**LIQUOR CALCIS CHLORATÆ.** Colourless.

Chlorinated Lime, 1; Distilled Water, 10; triturate and shake well together for three hours in a bottle and strain. =(1 in 10).

*Test.*—Sp. g. 1·035. About 1 fluid drachm (60 grains by weight) mixed with 20 grains of Iodide of Potassium dissolved in 4 ounces of water, when acidulated with 2 drachms of Hydrochloric Acid, gives a red solution, which requires for discharge of its colour 500 grain-measures of the volumetric solution of Hyposulphite of Soda, corresponding to 13 grains of available Chlorine in a fluid ounce. (Explanation of Test given under CALX CHLORATA.)

### *Medicinal Properties.*

Not much employed internally; externally as a lotion to foul ulcers, burns, chilblains, and cutaneous eruptions, especially the itch. A disinfecting agent.

*Dose.*—20 to 40 minims in a wineglassful of water.

(Same as Belg. and Russ.; also a weak solution, 1 of strong solution and 4 of water; Fr. 1 and 45: not in others.)

ANTIDOTES.—In case of poisoning by Chlorinated Lime the antidotes are, Emetics, White of Egg, Milk, Flour; not Acids.

**VAPOR CHLORI.**

Chlorinated Lime, 2 oz.; cold Water, sufficient to moisten it: the vapour to be inhaled from a suitable apparatus.

## CALCIS CARBONAS. *See* CRETA PRÆPARATA.

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## CALCIS CARBONAS PRÆCIPITATA.

### PRECIPITATED CARBONATE OF LIME.

**$CaCO_3$**, eq. 100.

A white crystalline powder. Insoluble in water.

Chloride of Calcium, 5; Carbonate of Soda, 13; boiling Water, 80: dissolve each in 40, mix and precipitate, wash the precipitate thoroughly, and dry at 212° F.

*Test.*—With Diluted Nitric Acid it effervesces and gives a clear solution, which, if perfectly neutral, and deprived of Carbonic Acid by boiling, is not precipitated by Saccharated Solution of Lime added in excess, or by the solution of Nitrate of Silver—indicating the absence of phosphates and chlorides.

*Medicinal Properties.*

Antacid and astringent.

*Dose.*—10 to 100 grs., in powder or mixture.

(Austr. Fr. Ger. Russ. and U.S.; not in others.)

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## CALCIS HYDRAS.

### SLAKED LIME.

**$CaH_2O_2$**, eq. 74.

A white powder, strongly alkaline and caustic.

Lime recently burned, 32; Distilled Water, 20: slake the lime, sift the powder, and keep in a bottle. Should be recently prepared.

Solubility: sparingly soluble in Water (1 in 900); the solution, on exposure, soon acquires a film of Carbonate of Lime.

*Test.*—Should not effervesce on the addition of an acid.

*Medicinal Properties.*

The Solution (Lime Water) is used in diarrhœa connected with acidity, and in some cases of dyspepsia; also in some calculous affections, and given to children for rickets. Given to correct chronic vomiting, and vomiting of pregnancy.

INCOMPATIBLES.—Vegetable and Mineral Acids, Alkaline and Metallic Salts, Tartar Emetic.

### Preparations.

**LINIMENTUM CALCIS.** A thickish cream.

Solution of Lime, 1; Olive Oil, 1: mix. =(1 in 2).

(Russ. equal parts Solution of Lime and Linseed Oil; U.S. Solution of Lime 8 fl. ozs., Flaxseed Oil 7 troy ozs.; Belg. Solution of Lime 88, Almond Oil 12; Fr. Linim. Calcaire, Solution of Lime 9, Almond Oil 1, but rejecting the water and using only the cream; not in Austr. Dan. and Ger.)

*Use.*—The best liniment to apply to burns and scalds.

**LIQUOR CALCIS.** Solution of Lime, or Lime Water. Colourless.

Slaked Lime, 1; Distilled Water, 80.

*Test.*—10 ounces require for neutralization at least 200 grain-measures of volumetric solution of Oxalic Acid, which corresponds to 5·6 grains of Lime.

Bottles containing lime water should be kept full, and well closed from the air.

Each ounce contains about ½ gr. of lime.

*Dose.*—½ to 2 oz. as an antacid. *Brit. Ph. Dose.*—1 to 4 oz.

(Same as U.S.; Fr. Eau de Chaux; Austr. and Belg. Aqua Calcis; Ger. Aqua Calcariæ; Russ. Calcaria Caustica Soluta; Dan. Sol. Hydratis Calcici.)

Water becomes saturated with much less lime than ordered, therefore Liquor Calcis is of the same strength in all.

Used for making Lotio Hydrargyri Flava et Nigra.

**LIQUOR CALCIS SACCHARATUS.** Colourless, but becomes more or less brown by keeping.

Slaked Lime, 1; Refined Sugar in powder, 2; Distilled Water, 20: digest for some hours, with occasional agitation, and strain. =(about 1 in 65).

1 oz. = 12 oz. Lime Water.

*Test.*—Sp. g. 1·052. 1 fluid ounce (460·2 grains by weight) requires for neutralization 254 grain-measures of volumetric solution of Oxalic Acid, which corresponds to 7·11 grains of Lime.

*Dose.*—15 to 60 minims in milk.

Not Official.

Liniment for Freckles.—Liniment of Lime, 8; Liquid Ammonia, 1: mix.

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## CALCIS HYPOPHOSPHIS.

### HYPOPHOSPHITE OF LIME.

$Ca2PH_2O_2$, eq. 170.

Obtained by heating phosphorus with hydrate of Lime and water until phosphuretted hydrogen gas ceases to be evolved, then filtering the liquid, separating uncombined lime with carbonic acid gas, and evaporating the remaining solution until the salt separates in a crystalline condition. This is sometimes improved by recrystallisation.

Solubility, 1 in 8 of water; it is not more soluble in boiling water. Insoluble in spirit.

*Characters and Tests.*—A white crystalline salt, with a pearly lustre, and a bitter nauseous taste. Heated to redness it ignites.

*Medicinal Properties.*

Given in cases of nervous and general debility and pulmonary consumption.

*Dose.*—5 to 10 grs. in water.

(Russ. Calcaria Hypophosphorosa; U.S.; not in others.)

Not Official.

SYR. CALCIS HYPOPHOSPHITIS.—Hypophosphite of Lime, 3; Water, 30; Sugar, 36.

*Dose.*—A fluid drachm, containing 3 grains.

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## CALCIS PHOSPHAS.

### PHOSPHATE OF LIME.

$Ca_3P_2O_8$, eq. 310.

A light white amorphous powder, prepared by dissolving Bone Ash in Hydrochloric Acid and precipitating with Ammonia.

Insoluble in water.

*Test.*—10 grains dissolve perfectly, and without effervescence, in Diluted Hydrochloric Acid—indicating absence of carbonate. The solution yields with Ammonia a white precipitate, which is insoluble in boiling Solution of Potash, and when washed and dried weighs 10 grains.

*Medicinal Properties.*

For rickets and mollities ossium; said to be useful in scrofulous affections, and to promote union of bone fractures.

*Dose.*—10 to 40 grs.

(Austr. Calcium Phosphoricum; Fr. Phosphate de Chaux; Ger. and Russ. Calcaria Phosphorica; U.S. Calcii Phosphas Præcipitata; not in others.)

Contained in Pulvis Antimonialis,—2 parts in 3.

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Not Official.

## CALENDULA.

### COMMON MARIGOLD.

Has lately been revived, and the Tincture (4 oz. of the florets to the pint of Proof Spirit) employed.

As an antispasmodic, sudorific, and emmenagogue; also in low fevers.

*Dose.*—1 to 2 drms.

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## CALUMBÆ RADIX.

### CALUMBA ROOT.

The root of the perennial herb, *Jateorrhiza Calumba*, sliced transversely and dried; from the forests of Eastern Africa between Ibo and the Zambesi. It is easily reduced to powder, which has a greenish tinge; it becomes browner with age, and deepens in colour when it is moistened.

*Tests.*—Moistened with a solution of Iodine, it becomes black—indicating presence of Starch.

A decoction is not blackened by the persalts of Iron—indicating absence of astringent matter.

### *Medicinal Properties.*

A bitter stomachic and tonic, useful in debility of the digestive organs, and to allay nausea attendant on pregnancy. Given in convalescence from acute diseases, combined with Alkalies or Bismuth. It is one of the few bitters that can be prescribed with Salts of Iron.

*Dose.*—Of the powder 10 to 20 grs. three or four times a day.

Frequently given with powdered Ginger and Rhubarb.

(In all the Pharmacopoeias.)

### Preparations.

**EXTRACTUM CALUMBÆ.** Becomes mouldy by keeping.

Calumba, cut small, 1; Distilled Water, 5: macerate in half the water for twelve hours, strain and press; macerate again with the remaining water, strain and press; mix and filter the liquors, and evaporate with the heat of a water bath to pill consistence.

8 parts of Root yield 1 part of Extract.

*Dose.*—2 to 10 grs.

(Same as Belg., which has also an alcoholic extract; Austr. Fr. Ger. and Russ. with Spirit; U.S. fluid extract only; not in Dan.)

An extract made with Spirit keeps well.

**INFUSUM CALUMBÆ.**

Calumba, coarsely powdered, 1; cold Distilled Water, 20: macerate one hour and strain. =(1 in 20).

Calumba root contains starch and mucilage, both of which are dissolved by hot water; cold water dissolves the mucilage only.

*Dose.*—1 to 2 ozs.

(U.S. allows both cold and hot water, about 1 in 32; not in others.)

Physicians prescribing for patients who wish to take with them a supply of their medicines containing Infusion of Calumba will find 2 drachms of Tincture to be of about the same therapeutical strength as 1 oz. of the Infusion.

**TINCTURA CALUMBÆ.** Reddish-brown.

Bruised Calumba, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally; pack in a percolator, and let it drain, then pour on the remaining spirit; when it ceases to drop, press, and add sufficient proof spirit to make up 8. =(1 in 8).

*Dose.*—½ to 2 drms. for an adult; 5 minims for a child.

(Belg. 1 in 5; Fr. and Russ. 1 and 5; U.S. about 1 in 7; all are by weight; not in others.)

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## CAMBOGIA.

GAMBOGE.

A Gum Resin, obtained from *Garcinia Morella*, imported from Siam, consisting of about 75 per cent. of Resin and 15 of Gum.

Soluble in Rectified Spirit, which is rendered of an opaque yellow by water; in Ammoniated Alcohol, which is not rendered turbid by the addition of water; in Ether to the amount of four-fifths.

*Test.*—An emulsion made with boiling water, and cooled, does not become green on addition of Solution of Iodine—indicating absence of flour or starch.

### *Medicinal Properties.*

It is employed in the treatment of dropsy, attended with torpidity of the bowels, generally in combination with Elaterium, Bitartrate of Potash, or Jalap. Also in cases of obstinate constipation, and has frequently been found effectual in the expulsion of the tape-worm. As it is apt to occasion much sickness and griping, it is best given in small doses, repeated at short intervals, until it operates.

It may be given in pill or emulsion, or dissolved in an alkaline solution; the last method has been recommended in dropsical complaints.

*Stimulates the intestinal glands, but not the liver.—Dr. Rutherford.*

*Dose.*—1 to 5 grs. In cases of tænia, may be increased to 10 or 15 grs.

(U.S. Gambogia; Belg. Gummi Guttæ; Fr. Gomme-Gutte; Ger. Gutti; Dan. and Russ. Gummi-Resina Gutti; not in Austr.)

### Preparation.

**PILULA CAMBOGIÆ COMPOSITA.** Intense brown.

Gamboge, 1; Barbadoes Aloes, 1; Compound Powder of Cinnamon, 1; Hard Soap, 2; Syrup, a sufficiency: mix. =(1 in 6 nearly).

*Dose.*—5 to 10 grs.

(Fr. and Belg. Aloes, Gamboge, Oil of Anise, and Honey; Fr. has also Pilules des Bontius, containing Ammoniacum and Vinegar instead of Cinnamon and Soap; not in others.)

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## CAMPHORA.

### CAMPHOR.

A concrete volatile oil, obtained from the wood of *Camphora officinarum*, imported in a crude state from China and Japan, and purified in this country by sublimation in bell-shaped masses. The Borneo Camphor from the Dryobalanops, though virtually the same as the official, is valued very much more by the Chinese.

Solubility, 1 in 900 of Water; 1 in 1¼ of Rectified Spirit; or by weight, 1 in 1; freely in Chloroform, Ether, volatile and fixed Oils, and Acetic Acid; but not in Alkalies. 3 of Camphor rubbed with 1 of Carbolic Acid crystals become a clear solution. 3 of Camphor and 3 of Hydrate of Chloral rubbed together liquefy. Carbonic Acid, Bicarbonate of Magnesia, and Myrrh increase its solubility in water. Milk is a solvent and a good vehicle to administer it in.

Its sp. g. varies from ·986 to ·996. It evaporates entirely if left exposed to the air. It melts at 347° F., boils at 400°, and in close vessels sublimes unchanged.

### *Medicinal Properties.*

imulant at first, afterwards sedative; antispasmodic, and dia-
retic.

ı moderate doses, it produces (in health) mental exhilaration,
eases the heat of the skin, and occasions diaphoresis. Given in
ated doses relieves strangury and distension of the bladder. It
ys nervous irritation, and produces a general placidity of feeling.
useful in cholera and diarrhœa, and in large doses it causes giddi-
and disposition to sleep. It is an antaphrodisiac, and given in
dee. Camphor Spirit mixed with warm water to bathe the nostrils
ighly useful in hay fever, and relieves irritation of the nostrils in
mon cold; has been injected subcutaneously as an hypnotic.

amphor Water is a good vehicle for giving Carbonate of Ammonia,
if the proportions are nicely balanced, makes a pleasant draught;
, Carbonate of Ammonia 5 grs., Camphor Water ½ oz., water 1 oz.

se.—2 to 10 grs.

(In all the Pharmacopœias.)

Contained in Linimentum Aconiti, Lin. Belladonnæ, and other Liniments and
ntments.

## Preparations.

**A CAMPHORÆ.** *Syn.* MISTURA CAMPHORÆ.

amphor, broken small, ½ oz.; Distilled Water, 1 gallon=160 ozs.:
st at least two days, confining the camphor under the water in a
lin bag attached to a glass rod.

e.—1 to 2 oz = about ½ or 1 gr. of Camphor.

(Belg. Mistura Camphoræ, made with a small quantity of Spirit; Fr. Eau Camphrée; U.S. with a little Spirit and Carbonate of Magnesia; not in others.)

**ENTUM CAMPHORÆ.** Pale straw.

ıphor, 1; Olive Oil, 4: dissolve. =(1 in 5).

Austr. (Oleum Camphoratum), 1 and 3; Dan. and U.S., 1 and 4; Belg. Fr. Ger. and Russ., 1 and 9; all by weight.)

**NTUM CAMPHORÆ COMPOSITUM.** Colourless.

hor, 5; English Oil of Lavender, ¼; Strong Solution of Am-
10; Rectified Spirit, 30: dissolve the oil and camphor in the
ıen add the ammonia gradually, shaking them together until
olution is formed. =(1 in 9).

ing. Most useful in tic-douloureux and chronic rheumatism. Painful
as been relieved by applying lint previously soaked in the liniment and
h a dry napkin until redness is produced, and then lightly rubbing the
solution of Bimeconate of Morphia until relieved.

gives *Brit. Ph.* formula; not in others.)

**CAMPHORÆ.** Colourless.

, 1; Rectified Spirit, 9: dissolve. =(1 in 10).

o 30 minims in Milk or on Sugar.

ıbout 1 in 7; Austr. Dan. Fr. (Alcool Camphré) and Ger., 1 in 10;
. and Russ., 1 in 13.)

**TINCTURA CAMPHORÆ COMPOSITA.** Light brown.

Opium, in coarse powder, 40 grs.; Benzoic Acid, 40 grs.; Camphor, 30 grs.; Oil of Anise, ½ drm.; Proof Spirit, 20 oz.: macerate seven days, filter, and add sufficient Proof Spirit to measure 20 oz.

=(1 grain of opium in 240 minims).

Known as Paregoric Elixir. 1 fluid drm. contains ¼ gr. Powder of Opium = ⅛ gr. of Extract of Opium.

Given with equal proportions of Tinct. of Squill to allay spasmodic cough in bronchitis and in phthisis.

*Dose.*—15 to 60 minims, or for a child 2 to 5 mins.

(All by weight. Brit. 1 Powdered Opium in 200 (about); U.S. 1 Powdered Opium in 240; Dan. and Belg. 1 Powdered Opium in 200; Ger. and Russ. alike, Tinct. Opii Benzoica, 1 in 200, contains 4 times more Benzoic Acid, and more than twice the amount of Aniseed and Camphor; Fr. 1 *Extract* of Opium in 200, therefore about twice the strength of British; not in Austr.)

Symptoms of poisoning by Camphor: convulsions, lividity of countenance, stupor, arrest of urinary secretions.

ANTIDOTES.—Stomach pump or emetics, stimulants freely, and warmth to the extremities.

### Not Official.

CAMPHOR BALLS.—Camphor, 2; White Wax, 5; Spermaceti, 3; Oil of Almonds, 3; Tincture of Tolu, ¼: melt, and pour into half-ounce gallipots.

CAMPHORA CUM CRETÂ.—Camphor, 1; Prepared Chalk, 8: powder the camphor by rubbing it with a few drops of rectified spirit, mix in the chalk, and pass the whole through a sieve. A dentifrice.

CERATUM CAMPHORÆ.—Camphor, 2; White Wax, 3; Lard, 4; Oil of Almonds, 3: melt.

ESSENTIA CAMPHORÆ.—Camphor, 1; Rectified Spirit, 20:—or Camphor, 1; Rectified Spirit, 18, Tincture of Myrrh, 2. In domestic use for making Julep. Given for diarrhœa, 5 minims every 10 or 15 minutes in water till diarrhœa is arrested.

SPIRITUS CAMPHORÆ FORTIOR.—A saturated solution, in Rectified Spirit.

UNGUENTUM CAMPHORÆ.—Camphor, 3; White Wax, 1; Lard, 9: mix.

CAMPHORATED VINEGAR.—Camphor, 1; Alcohol, 60; Vinegar, 180: mix.

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Not Official.

## CAMPHORA MONOBROMATA.

### MONOBROMATED CAMPHOR.

$C_{10}H_{15}BrO$, eq. 231.

Colourless needles or prisms.

Insoluble in Water; freely soluble in Alcohol, Ether and fixed oils.

*Dose.*—2 to 5 grains can be prescribed in pills with Conserve of Roses, or can be dissolved in Almond or Olive Oil and mixed with mucilage and water.

It has been stated to be an antidote to Strychnia.

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## CANELLÆ ALBÆ CORTEX.

### WHITE CANELLA BARK.

The Bark of *Canella alba*; from the West Indies.

Contained in Vinum Rhei.

# CANNABIS INDICA.

## INDIAN HEMP.

The flowering tops of the female plant of *Cannabis sativa*, from which the resin has not been removed, dried. Cultivated in India.

We are indebted to Dr. O'Shaughnessy for the first introduction of Indian Hemp into this country. He brought over a quantity from India, which the Author converted into extract for him, and distributed amongst a large number of the profession under Dr. O'Shaughnessy's directions.

### *Medicinal Properties.*

Has been given in tetanus, and might be tried in large doses for hydrophobia.

Dr. Clendinning used it largely, and his opinion is as follows:—"It acts as a soporific or hypnotic in conciliating sleep; as an anodyne in lulling irritation; as an antispasmodic in checking cough and cramp; as a nervine stimulant in removing languor and anxiety, and raising the pulse and spirits without any drawback or deduction on account of indirect or incidental inconveniences, producing tranquil sleep without causing constipation, nausea, or other effect or sign of indigestion, without headache or stupor." Coffee and cocoa aid the action.

More recently, Dr. Russell Reynolds has found it very successful in certain cases of insomnia, neuralgia, and spasm. He says it relieves these derangements of the nervous system, without interfering with any one of the functions of organic life, and does not produce the after feeling of misery which follows many opiates.

Most valuable in allaying all disturbance of the spinal cord, and is given in hay fever.

Not prescribed in powder.

(Austr. Belg. Ger. Russ. and U.S.; Fr. has only "Hachisch" prepared from the leaves.)

ANTIDOTES.—In case of over-dose, hot brandy-and-water may be given, vegetable acids, such as lemon juice, vinegar, and the like, and the patient be allowed to sleep. A blister to the nape of the neck is recommended to control its violent action.

### Preparations.

**EXTRACTUM CANNABIS INDICÆ.** Most intense green.

Indian Hemp, in coarse powder, 1; Rectified Spirit, 5: macerate seven days, press out the tincture, distil off the spirit, and evaporate to a soft extract.

*Dose.*—½ to 1 gr. in pill. In delirium tremens, 2 grains given every hour for four times gave relief. *Med. Record*, p. 192. May, 1881.

(Austr. Ger. Russ. and U.S.: not in others.)

Soluble in Olive Oil. 6 of Indian Hemp yield 1 of Alcoholic Extract.

**TINCTURA CANNABIS INDICÆ.** Intense green.

Extract of Indian Hemp, 1; Rectified Spirit, 20: dissolve. =(1 in 20).

22 minims contain 1 gr. of extract.

*Dose.*—5 to 20 minims with 1 drm. of mucilage, adding 1 oz. of water.

(Same as Ger. and U.S.; Russ. 1 and 10; not in others.)

INCOMPATIBLES.—Waters and Watery Infusions.

In prescribing the Tincture it should be previously triturated with the mucilage, or the resin will be precipitated by the water.

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## CANTHARIS.

### CANTHARIDES.

The beetle, *Cantharis vesicatoria*, dried; collected in Spain, France, Russia, Sicily, and Hungary. Contains a crystalline principle, called Cantharidine.

Free from mites.

The powder should be dry and kept closely corked, for if at all damp it is apt to acquire a putrid odour. A lump of camphor kept in it prevents mites.

### *Medicinal Properties.*

Externally its effects are rubefacient and irritant; by continued application it is vesicant. For the latter purpose the Charta or Liquor Epispasticus is used, and is especially effective in inflammation of deep-seated parts, as in pleuritis, pericarditis, pneumonia, etc. It acts for a longer period, and is less irritating to the patient, than Ammoniacal or Acetic Acid embrocations. Internally as tincture in chronic affections of the nervous system, paraplegia, etc. It has a diuretic effect, and is given in gleet or other mucous discharges; but it should be given cautiously, for it sometimes produces strangury.

It is used as an application to ringworm. It is the basis of most of the applications used to increase the growth of hair.

In chronic inflammation of the bladder it should *not* be used as a counter-irritant, from its irritating effects on the urinary organs when absorbed by the skin. A solution of Nitrate of Silver (½ drm. to 1 oz. of water) is to be preferred.

(In all the Pharmacopœias.)

ANTIDOTES.—In case of poisoning by Cantharides use Emetics or stomach pump, followed by Castor Oil and Opium. Emollient Drinks.

### Preparations.

**ACETUM CANTHARIDIS.** Intense brown.

Cantharides, in powder, 2; Glacial Acetic Acid, 2; Acetic Acid, 18, or a sufficiency: add the glacial acetic acid to 13 of acetic acid, and in this mixture digest the cantharides for two hours at a temperature of 200° F.; when cold place them in a percolator, and when the liquid ceases to drop, pour over the residuum 5 of acetic acid, and when the percolation is finished, press and make the whole liquid up to 20 with Acetic Acid. =(1 in 10).

**CHARTA EPISPASTICA.** Blistering Paper. White.

White Wax, 4; Spermaceti, 1½; Olive Oil, 2; Resin, ¾; Canada Balsam, ¼; Cantharides, in powder, 1; Distilled Water, 6: digest all the ingredients, except the Canada balsam, in a water bath for two hours, stirring them constantly, then strain, and separate the plaster from the watery liquid; mix the Canada balsam with the plaster melted in a shallow vessel, and pass strips of paper over the surface of the hot liquid, so that one surface of the paper shall receive a thin coating of plaster. The paper is usually ruled so as to indicate square inches.

(U.S. (Charta Cantharidis), Fr. (Papier Épispastique No. 1), both only half the strength of Brit. Ph.; not in others.)

**EMPLASTRUM CANTHARIDIS.** Dark brown.

Cantharides, in very fine powder, 12; Yellow Wax, 7½; prepared Suet, 7½; Resin, 3; prepared Lard, 6: melt the last four together, and stir in the first: continue the stirring until cold. =(1 in 3).

(Austr. Belg. Fr., 1 in 3; Dan. Ger. and Russ., about 1 in 4; not in U.S.)

Oiled tissue paper, or very thin silk, is sometimes placed between the plaster and the skin, to prevent irritant action on the urinary organs. In France, powdered Camphor is sprinkled on the blister for the same purpose.

**EMPLASTRUM CALEFACIENS.** Yellow.

Cantharides, in coarse powder, 1; boiling Water, 5; expressed Oil of Nutmeg, 1; Yellow Wax, 1; Resin, 1; Soap Plaster, 13; Resin Plaster, 8: infuse the cantharides in the water six hours, strain and press through calico, evaporate till reduced to one-third, then add the rest, melt and stir all together. =(about 1 in 25).

(U.S. Emplastrum Picis cum Cantharide, 1 in 39; not in others.)

**LIQUOR EPISPASTICUS.** Blistering Liquid. Greenish brown.

Cantharides, in powder, 8; Acetic Acid, 4; Ether, 20: macerate the cantharides in the acetic acid twenty-four hours, and add ether to percolate 20. =(1 in 2½).

(U.S. (Linimentum) Cantharides 1, Oil of Turpentine 8, digest hot three hours and strain; not in others.)

Applied with a camel-hair brush, speedily produces a blister.

**TINCTURA CANTHARIDIS.** Straw colour.

Cantharides, in coarse powder, 1; Proof Spirit, 80: macerate, agitating occasionally, for seven days in a closed vessel, strain, press, filter, and add sufficient proof spirit to make up 80. =(1 in 80).

*Dose.*—5 to 20 minims.

(Brit. 1 in 72; Dan. 1 in 30; U.S. 1 in 28; Austr. 1 and 5; Belg. 1 in 5, also with Sulphuric Ether 1 in 5; Fr. 1 in 10, also with Acetic Ether 1 in 10; Ger. and Russ. 1 and 10; all by weight.)

**UNGUENTUM CANTHARIDIS.** Olive brown.

Cantharides, 1; Olive Oil, 6; Yellow Wax, 1: digest the cantharides in the oil for twelve hours; then for ¼ hour at 212°; strain through muslin with strong pressure, add the product to the wax melted, and stir till cold. =(1 in 7).

Employed to promote discharge from a blistered surface.

(Belg. (Nigrum), 1 in 6, (Album), 1 in 10, (Viride), 1 in 33; Fr. Pommade Épispastique Verte, 1 in 33, and P. E. Jaune, 1 in 17; Ger. 1 in 7; U.S. 1 in 12; Russ. 1 in 5; Dan. Ung. Canth. Simplex, 1 in 6.)

### Not Official.

HAIR WASH.—Vinegar of Cantharides, 1; Glycerine, 1; Tincture of Bark, ½; Orange-flower Water, 8; Rose Water, 8: mix.

WASH FOR STRENGTHENING THE HAIR.—Tinct. Cantharides, Rectif. Spirit, Distilled Vinegar, Lime Water, of each 5 oz.; Sulphate of Quinine, 6 grs.; Aromatic Vinegar, 1 drm.: mix.

LINIMENTUM CRINALE.—Cantharidine, 1 gr.; Acetic Ether, ½ oz.: dissolve and add Rectified Spirit, 3 oz.; Castor Oil, 1 oz.; Oil of Lavender, 15 minims.

This Liniment is highly recommended for application to the head where the hair is falling off; but after applying it a few times the head should be washed, or it may accumulate and cause too much irritation.

UNGUENTUM STIMULANS.—Erasmus Wilson's. Cantharides in Powder, 3; Lard, 12: macerate with a moderate heat for twenty-four hours and filter through paper.

*The following are also employed as blistering agents:—*

Brown's Blistering Tissue; Papier d'Albespeyres, No. 1, 2, and 3: 3 is the strongest.

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## CAPSICI FRUCTUS.

### CAPSICUM FRUIT.

The dried ripe fruit of *Capsicum fastigiatum*; imported from Zanzibar, and distinguished in commerce as Guinea Pepper and Pod Pepper. That from Nepaul has the finest flavour. These in powder are sold as Cayenne Pepper.

It yields its virtues to Water, Alcohol, Ether, Acetic Ether, and the fixed and volatile Oils.

### *Medicinal Properties.*

A powerful stimulant, used chiefly as a condiment. In intermittent fevers with Quinine, in low forms of fever, diarrhœa, cholera, and in the black vomit of hot climates. In dyspepsia and sea-sickness. Used as a gargle in scarlet fever and malignant sore throat. Externally as a rubefacient.

*Dose.*—½ to 1 gr. of the powder in a pill, or in dinner pills.

(In all the Pharmacopœias, except Austr.; Fr. Poivre de Guinée; Belg. Piper Hispanicum.)

### Preparation.

**TINCTURA CAPSICI.** Light yellowish-green.

Capsicum, bruised, ¾; Rectified Spirit, 20; macerate forty-eight hours with 15 of the spirit, agitating occasionally, pack in a percolator, and let it drain, then pour on the remaining spirit; as soon as it ceases to drop, press the marc, filter and add spirit to make up 20. =(1 in 27 nearly).

*Dose.*—10 to 20 minims.

Tinct. Capsici, 1½ drms.; Tinct. Aurant., 4 drms.; Syr. Aurant., 4 drms.; water to 6 ounces. Take a tablespoonful as required three or four times a day for dipsomania.—*Brit. Med. Jl.*, Sept. 25, 1875.

(U.S. 1 in 28; Belg. (Tinct. Piper. Hispan.) 1 in 5; Dan. Ger. and Russ. 1 and 10; all by weight; not in others.)

Not Official.

GARGARISMA.—Tinctura Capsici, ½ to 1 drm. in 8 oz. of infusion of Roses.

CAPSICIN.—An acrid soft resin or oil obtained by digesting the Alcoholic Extract in Ether and evaporating the Ethereal solution. It is a thick liquid of a yellowish red colour, which becomes very fluid when gently heated, and at a high temperature volatilizes. ¼ a grain only, thus volatilized in a large room, will cause all who respire the air of the room to cough and sneeze. It is soluble in Alcohol, Ether, and Oil of Turpentine.

OLEORESINA CAPSICI, U.S.

LINIMENTUM CAPSICI (the concentrated Tincture of Dr. Turnbull).—Capsicum, 1; Rectified Spirit, 3: macerate seven days and strain.

Used externally for swollen chilblains and as a counter-irritant, but not when the skin is broken. For chilblains, saturate a piece of sponge or flannel with the tincture, and rub the chilblain well until a strong tingling is produced; continue daily until recovery. A small dossil of lint or cotton, dipped into the tincture, is an excellent remedy for toothache.

Tissue paper imbued with a strong tincture of this drug, and perhaps a little mustard oil, is sold as a sinapism, to produce counter-irritation, under the name of Sinapine.

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## CARBO ANIMALIS.

### ANIMAL CHARCOAL. BONE BLACK.

The residue of bones which have been exposed to a red heat without the access of air; consists principally of charcoal, phosphate, and carbonate of lime.

(Belg. Ger. Russ. and U.S.)

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## CARBO ANIMALIS PURIFICATUS.

### PURIFIED ANIMAL CHARCOAL.

From which its earthy salts have been almost wholly removed.

Bone Black, 16; Hydrochloric Acid, 10; Distilled Water, a sufficiency.

Digest the Bone Black in the acid mixed with twice the quantity of water at a moderate heat for two days, agitating occasionally, thoroughly wash on a calico filter, until what passes through gives scarcely any precipitate with nitrate of silver; dry, and heat to redness, in a covered crucible.

*Test.*—If it contain Carbonate of Lime, Hydrochloric Acid will cause effervescence; and if Phosphate of Lime be present, the acid will dissolve the salt, and yield it as a precipitate on the addition of Ammonia. When burned at a high temperature, with a little red Oxide of Mercury and free access of air, it leaves scarcely any residue.

### *Medicinal Properties.*

Dr. Garrod, and Dr. Rand of Philadelphia, state that it has the property of counteracting the poisonous effects of Morphia, Strychnia, and Aconitia. Dr. Rand says that these alkaloids may be swallowed with impunity if mixed in due proportion with Purified Animal Charcoal. It destroys the fœtor of ulcers, etc. It is much used as a decolorizing agent in various pharmaceutical processes, and will decolorize Claret.

*Dose.*—20 to 60 grs.

(Belg. U.S.; not in others.)

A convenient mode of application to putrid sores has been furnished by Messrs. Pichot et Cie, Paris, in their "Papiers Carbonifères," and a softer substance called Charpie, also Sachets de Charpie Carbonifères.

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## CARBO LIGNI.

### WOOD CHARCOAL.

Wood charred by exposure to a red heat without access of air.

The Oak, Beech, Hazel, Willow, and Poplar are employed.

*Test.*—When burned at a high temperature, with free access of air, it leaves not more than 2 per cent. of ash.

### *Medicinal Properties.*

Antiseptic and absorbent. Given in powder or in capsules in cases of distension by intestinal gas, and in foul eructations; also in dyspepsia attended with flatus and acidity. Externally, as a poultice, it absorbs the fœtor of ulcers.

Respirators of Charcoal are made to protect the lungs from poisonous gases.

*Dose.*—20 to 60 grs.

(In all the Pharmacopœias; Fr. Charbon Végétal.)

### Preparation.

**CATAPLASMA CARBONIS.**

Wood Charcoal, ½ oz.; Bread, 2 oz.; Linseed Meal, 1½ oz.; boiling Water, 10 oz.: soak the bread in the water near the fire for fifteen minutes, add the linseed meal and half the charcoal, stirring to a soft poultice, sprinkling the remainder of the charcoal on the surface.

(Not in other Pharmacopœias.)

Charcoal Biscuits, each containing 10 grains, are sold by Mr. Bragg.

Charcoal capsules of gelatine, each containing 4 grains, are also in use.

Charcoal Cautery, Getchell's. Charcoal, 21; Nitre, 1; Powder of Acacia, 3; water to make a paste and form sticks about 2 inches long, and thick as the little finger, but rounded at the point, and then dried.

# CARDAMOMUM.

## CARDAMOMS.

The seeds of *Elettaria Cardamomum* contained in their pericarps, which are to be removed when the seeds are employed. Cultivated on the Malabar coast.

### *Medicinal Properties.*

Cordial and carminative; less heating and stimulating than some others. A useful adjuvant to purgatives to prevent griping.

*Dose.*—Of the seeds powdered, 5 to 20 grs.

1 of fruit yields ¾ of seeds.

(In all the Pharmacopœias.)

Contained in Extractum Colocynthidis Compositum, Pulvis Cinnamomi Compositus, Pulvis Cretæ Aromaticus, Tinctura Gentianæ Composita, Tinctura Rhei, and Vinum Aloes.

### Preparation.

**TINCTURA CARDAMOMI COMPOSITA.** Deep lake colour.

Cardamom seeds, freed from their pericarps, bruised, 1 oz.; Caraway, bruised, 1 oz.; Raisins, freed from their seeds, 8 ozs.; Cinnamon, bruised, 2 ozs.; Cochineal, in powder, 240 grains; Proof Spirit, 80 ozs.: macerate forty-eight hours with ¾ of the spirit, agitating occasionally, pack in a percolator, and let it drain, pour upon it the remainder of the spirit, and when it ceases to drop, press, and wash the marc with proof spirit to make up 80 ozs. =(1 in 80).

*Dose.*—½ to 2 drms.

(Fr. give the Brit. Ph. formula; U.S. 1 in 50, contains Honey, and is made with the *fruit* of the Cardamoms; Belg. have the simple Tincture; not in others.)

Contained in Decoctum Aloes Compositum, Mistura Ferri Aromatica, Mistura Sennæ Composita, Tinctura Chloroformi Composita.

Not Official.

# CARNIS EXTRACTUM.

## EXTRACT OF MEAT.

Carnis Extractum, Ger.—Has an agreeable odour, grateful flavour, and is freely soluble in water.

Liebig says, "Vegetable Albuminates contained in bread, peas, beans, and potatoes are identical with Albuminates contained in the flesh of animals; and when these are added to extract of meat, they impart to it the peculiar nutritive value which distinguishes meat in our estimation from other food."

# CARUI FRUCTUS.

## CARAWAY FRUIT.

The dried fruit of the *Carum Carui.* Cultivated in England and Germany. The biennial herb flowers in the second year, and the fruit ripens in July or August. Yields from 3 to 6 per cent. of Oil.

*Medicinal Properties.*

Aromatic, stomachic, and carminative. Used occasionally in flatulent colic, and as an adjuvant to other medicines.

(In all the Pharmacopœias.)

Contained in Conf. Opii, Conf. Piperis, Pulv. Opii Comp., Tinct. Cardamomi Comp., and Tinctura Sennæ.

### Preparations.

**AQUA CARUI.**

Caraway, bruised, 1; Water, 20: distil 10. =(1 in 10).

*Dose.*—1 to 2 oz.

(Russ. made with oil; not in other Pharmacopœias.)

**OLEUM CARUI.** Pale straw.

The Oil distilled in Britain, sp. g. ·964.

Added to purgative medicines to prevent griping.

*Dose.*—2 to 4 minims.

(Austr. Belg. Ger. and U.S.; Fr. Huile Volatile de Carvi; Dan. Aetheroleum Carvi; Russ. sp. g. ·900—·960.)

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## CARYOPHYLLUM.

### CLOVES.

The dried unexpanded flower-buds of *Caryophyllus aromaticus*; cultivated in Penang, Bencoolen, and Amboyna.

*Test.*—They emit, when indented with the nail, an oil of a strong fragrant odour.

*Medicinal Properties.*

Stimulant, aromatic, and carminative; sometimes administered in substance or infusion to correct nausea, vomiting, and flatulency, and to promote digestion. But chiefly used to qualify other medicines.

The powder contained in Infus. Aurantii. Co., Mist. Ferri Aromatica, Vin. Opii.

*Dose.*—5 to 10 grs.

(In all the Pharmacopœias; Fr. Girofles.)

### Preparations.

**INFUSUM CARYOPHYLLI.**

Cloves, bruised, 1; boiling Distilled Water, 40: infuse half an hour, and strain. =(1 in 40).

*Dose.*—1 to 2 oz.

(U.S. 1 in 60; not in others.)

INCOMPATIBLES.—Lime Water, Salts of Iron, Mineral Acids, Gelatine.

**OLEUM CARYOPHYLLI.**

The Oil distilled in Britain, sp. g. 1·034 to 1·061, therefore sinks in water: colourless when recently distilled, and becomes reddish-brown by keeping. Soluble in Alcohol, Ether, and Strong Acetic Acid.

Used as an adjunct to purgatives; or applied to carious teeth.

Contained in Confect. Scammonii, Pil. Colocynth. Co., Pil. Coloc. et Hyoscyami.

*Dose.*—1 to 4 minims.

(In all the Pharmacopœias.)

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# CASCARILLÆ CORTEX.

## CASCARILLA BARK.

The Bark of *Croton Eluteria*, from the Bahamas.

Gives off a fragrant odour when burnt.

### *Medicinal Properties.*

Aromatic, stomachic, and tonic. Used in dyspepsia, chronic diarrhœa, dysentery, and in recovery from acute diseases. Formerly used in intermittent fevers, but now almost entirely superseded by Cinchona for that purpose.

*Dose.*—In powder 10 to 30 grains.

(In all the Pharmacopœias.)

### Preparations.

**INFUSUM CASCARILLÆ.**

Cascarilla, in coarse powder, 1; boiling Distilled Water, 10: infuse an hour, and strain. =(1 in 10).

*Dose.*—1 to 2 oz.

(U.S. 1 troy ounce in 16 fl. ozs.; not in others.)

INCOMPATIBLES.—Lime Water, Metallic Salts, and Mineral Acids.

This infusion quickly changes, and will scarcely keep good for a day in summer.

1 oz. of Infusion is of about the same therapeutical strength as ½ oz. of Tincture, but the infusion is by far the more aromatic, and when it is prescribed with an aromatic Tincture keeps good.

**TINCTURA CASCARILLÆ.** Dark reddish-brown.

Cascarilla, bruised, 1; Proof Spirit, 8; macerate forty-eight hours with 6 of the spirit, agitating occasionally; pack in a percolator, let it drain, and pour on the remainder of the spirit, and when it ceases to drop, wash the marc, press, filter, and add proof spirit to make up 8. =(1 in 8).

*Dose.*—½ to 2 drms.

(Belg. Dan. Fr. Ger. and Russ. 1 in 5; not in Austr. and U.S.)

This tincture is frequently prescribed with the diluted mineral acids, and then the resin is separated, which fills the mixture with minute floccules; it is therefore better, when giving acids, to prescribe the infusion.

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# CASSIÆ PULPA.

## CASSIA PULP.

The pulp from the pods of the Purging Cassia, *Cassia Fistula*, imported from the East or West Indies.

*Medicinal Properties.*

Laxative. Useful in small doses for habitual costiveness. Large doses occasion nausea, flatulence, and griping; generally given in combination.

*Dose.*—As a laxative, 60 to 120 grs.; as a purgative, 1 to 2 oz.

(Belg. Fr. U.S. Cassia Fistula; not in others.)

Contained in Confectio Sennæ; 1 part in 8 nearly.

## CASTOREUM.

### CASTOR.

The dried preputial follicles and their secretion, obtained from the Beaver, *Castor Fiber*, the oil sacs rejected; imported from the Hudson's Bay Territory.

*Medicinal Properties.*

Moderately stimulant and antispasmodic. In large doses it quickens the pulse, and increases the heat of the skin; but as usually employed in small doses, it chiefly affects the nervous system. Used in low forms of fever with nervous symptoms, in spasmodic diseases, in hysteria and epilepsy.

*Dose.*—Of the powder 5 to 10 grs.

(In all the Pharmacopœias except Austr.)

### Preparation.

**TINCTURA CASTOREI.** Deep red.

Castor, in coarse powder, 1; Rectified Spirit, 20: macerate seven days, agitating occasionally, strain, press, and add sufficient rectified spirit to make up 20. =(1 in 20).

*Dose.*—½ to 1 drm.

(Dan. 1 in 5; Belg. Fr. Ger. and Russ. 1 and 10; U.S. 1 in 12½; all by weight. Not in Austr.)

## CATAPLASMATA.

The Cataplasms were contained in the London Pharmacopœia only, and are adopted by the Brit. Ph. with very slight modification. The formulas will be found under the names of the substances from which they are prepared.

The perfection of making a large poultice is to warm the linseed meal in the basin before the fire, to have boiling water at hand, and before mixing to have the muslin handkerchief spread on a piece of flannel on a table, that as soon as mixed it may be spread and applied without loss of time.

CATAPLASMA CARBONIS, 1 in 28.
CATAPLASMA CONII, 1 powder in 14.
CATAPLASMA FERMENTI. *See* Cerevisiæ, 1 in 4½.
CATAPLASMA LINI, 1 powder in 3½.
CATAPLASMA SINAPIS, 1 powder in 6.
CATAPLASMA SODÆ CHLORATÆ, 1 solution in 7.

Cataplasms that are not official are enumerated in the index.

# CATECHU PALLIDUM.

## PALE CATECHU.

An extract of the leaves and young shoots of the *Uncaria Gambir*, prepared at Singapore and in other places in the Eastern Archipelago.

It generally occurs in cubical reddish-brown pieces, also in square sticks, porous, bitter and astringent in taste.

Solubility: entirely soluble in boiling Water; the solution, when cold, is not rendered blue by Iodine. Of 100 parts, only 60 are dissolved by cold Water, and the solution is bright. 30 parts of Isinglass precipitate the whole of the astringent matter.

The pale Catechu being already in the Edin. the Brit. 1864 retained it with the Black; but the black is the one adopted by other Pharmacopœias, and is preferred in the arts and manufactures; it is well known to be far superior to the pale in astringency, and always to be had of good quality; it is therefore a matter of surprise and regret that it has been rejected from the British Pharmacopœia, 1867.

### *Medicinal Properties.*

A powerful astringent. Used chiefly in diarrhœa and some forms of atonic dyspepsia accompanied with pyrosis; also as a remote astringent for hemorrhage and mucous discharges. Lozenges are the best medium for administering it in relaxed conditions of the uvula.

*Dose.*—10 to 30 grs. in powder.

INCOMPATIBLES.—The Alkalies, Metallic Salts, and Gelatine.

### Preparations.

**INFUSUM CATECHU.**

Pale Catechu, in coarse powder, 160 grs.; Cinnamon, bruised, 30 grs.; boiling Distilled Water, 10 oz.: infuse half an hour, and strain. =(1 in 27).

*Dose.*—1 to 2 oz.

(U.S. (Compositum) *from black Catechu;* not in others.)

**PULVIS CATECHU COMPOSITUS.** Reddish-brown.

Pale Catechu, 4; Kino, 2; Rhatany, 2; Cinnamon, 1; Nutmeg, 1: all in powder; mix. =(1 in 2½).

*Dose.*—20 to 40 grains. Aromatic, astringent.

(Not in other Pharmacopœias.)

**TINCTURA CATECHU.** Deep reddish-brown.

Pale Catechu, in coarse powder, 2½; Cinnamon, bruised, 1; Proof Spirit, 20: macerate for seven days with agitation, strain, press, filter, and add proof spirit to make up 20. =(1 in 8).

*Dose.*—½ to 2 drms., or for a child 5 to 10 mins.

(U.S. 1 in 10; Belg. Fr. (Tinct. Cachou); Ger. and Russ. 1 and 5; all by weight and with black Catechu. Not in Austr. and Dan.)

**TROCHISCI CATECHU.** Light brown.

Pale Catechu, in powder, 720 grs.; Refined Sugar, in powder, 25 oz.; Gum Acacia, in powder, 1 oz.; Mucilage of Gum Acacia, 2 oz.; Distilled Water, a sufficiency: divide into 720 lozenges.

Each lozenge contains 1 grain of Catechu.

*Dose.*—1 to 6 lozenges.

Not Official.

**CATECHU NIGRUM.**—Black Catechu, Pegu Catechu, Cutch.—An extract from the heart wood of Acacia Catechu, dried and imported from Pegu. It generally occurs in irregularly shaped blackish-brown masses, astringent, and bitter in taste.

Solubility: of 100 parts, only 88 are dissolved by cold water, the solution being very turbid. 60 parts of Isinglass precipitate the whole of the astringent matter.

*Dose.*—5 to 15 grs.

(In all the Pharmacopœias except Austr. Dan. and Brit.)

⁂ As **GUMMI RUBRUM** is advantageously used as a substitute for Catechu, it may be proper to mention it here, but it will be found in the alphabetical order with its preparations.

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# CERA ALBA.*

## WHITE WAX.

Yellow Wax, bleached by exposure to moisture, air, and light.

*Test.*—Not unctuous to the touch: does not melt under 150° F.

Solubility: entirely in Oil of Turpentine, insoluble in Alcohol and Ether, slightly soluble in boiling Alcohol and Ether.

### *Medicinal Properties.*

Emollient; chiefly employed as an ingredient in Ointments.

(In all the Pharmacopœias; Fr. Cire Blanche.)

Contained in Unguenta Cetacei, Plumbi Subacetatis Comp. and Simplex; also in Suppositoria and Charta Epispastica.

### Preparation.

**UNGUENTUM SIMPLEX.** White.

White Wax, 2; Prepared Lard, 3; Almond Oil, 3: melt together, and stir till it becomes solid. This is necessary, because the Ointment is apt to granulate if the stirring is not continued until it solidifies. =(1 in 4).

(U.S. Lard 8, Yellow Wax 2; Austr. Lard 8, White Wax 2; Belg. Lard 17, White Wax 3; Ger. (Unguentum Cereum), Olive Oil 5, Yellow Wax 2; Fr. (Cérat Simple), Oil of Almonds 6, White Wax 2; Dan. (Ung. Cerae), and Russ. (Ung. Cereum), Olive Oil 6, Yellow Wax 2.)

Not Official.

Cold Cream.—White Wax, 1; Spermaceti, 1; Oil of Almonds, 6; Rose Water, 9; Otto of Rose to perfume it. Melt together, by means of a water bath, the oil, spermaceti, and wax, then gradually add the rose water, and stir till cold.

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* This wax has been much used in ointments, but the Author has observed that the ointments made with it grow rancid, and when the yellow wax is used the ointment keeps a long time without rancidity.

## CERA FLAVA.

### YELLOW WAX.

The prepared honeycomb of the hive-bee, *Apis Mellifica.*

When quite fresh, is of a golden yellow, but on keeping gets brown.

*Test.*—Not unctuous to the touch; does not melt under 140° F.; yields nothing to cold Rectified Spirit; only three-fourths are dissolved in Oil of Turpentine. Boiling Water in which it has been agitated, allowed to get cold, is not rendered blue by Iodine—indicating absence of flour, with which it was formerly mixed; it is, however, rarely adulterated now.

*Medicinal Properties.*

Chiefly used in medicine as an ingredient of plasters and ointments, and is preferable to White Wax for the purpose, the ointments keeping a long time without becoming rancid.

(In all the Pharmacopœias; Fr. Cire Jaune.)

Contained in several of the Emplastra and Unguenta.

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## CEREVISIÆ FERMENTUM.

### BEER YEAST.

The ferment obtained in brewing beer; viscid, semi-fluid, frothy, and consists of numerous microscopic round or oval confervoid cells.

Insoluble in Alcohol or Water.

*Medicinal Properties.*

Has been recommended as an antiseptic and stimulant in typhus and typhoid fevers, and in low states of the nervous system. It is, however, superseded by more convenient medicines.

*Dose.*—(Fresh) ½ to 1 oz. every two hours, alone or with water.

(U.S.; not in others.)

**Preparation.**

**CATAPLASMA FERMENTI.**

Beer Yeast, 6; Wheaten Flour, 14; Water (100° F.), 6: mix. Place the mass near the fire till it rises.

Useful in foul and sloughing ulcers.

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## CERII OXALAS.

### OXALATE OF CERIUM.

$CeC_2O_4.3H_2O$, eq. 234.

A white insoluble powder. Introduced into practice by Sir James Simpson, of Edinburgh. Cerium was discovered in 1803, and is now obtained chiefly from a mineral called Cerite.

*Test.*—10 grs. when incinerated lose 5·2 grs. in weight.

### *Medicinal Properties.*

Sedative, tonic. Of great value in general chronic intestinal eruption, irritable dyspepsia, gastrodynia, and pyrosis, in chronic vomiting, and vomiting during pregnancy. In convulsive diseases, as chorea and epilepsy, it does not produce the discoloration of the skin, as does the use of Nitrate of Silver.

(Brit. Pharm. dose 1 to 2 grains.)

Sir James Simpson introduced it into practice, and prescribed it in 10-grain doses for sickness during pregnancy. (*Practitioner*, June, 1878.) It can be safely administered in 10-grain doses 3 times a day for many days in succession, the only unpleasant symptom when so used was slight dryness of mouth, that appeared after several days. It was most efficacious in the treatment of chronic cough, and the initial dose should be 5 grains. It did not disturb the stomach; on the contrary, relieved nausea and improved digestion. (Conclusions arrived at by the Committee of the New York Therapeutical Society on April 9, 1880, *vide New York Medical Record*, May 1, 1880.)

(U.S.; not in others.)

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## CETACEUM.

### SPERMACETI.

A white concretion prepared from the oily matter in the head of the *Physeter macrocephalus*, or sperm whale, inhabiting the Pacific and Indian Oceans.

Nearly pure Cetine, separated by cooling, filtration, and pressure, from the oil, and afterwards purified.

Soluble in Fixed Oils, in boiling Ether, and in boiling Alcohol. Can be reduced to powder by the addition of Rectified Spirit.

*Test.*—Scarcely unctuous to the touch; does not melt under 100° F.

Contained in Charta Epispastica.

(In all the Pharmacopœias.)

### *Medicinal Properties.*

Emollient and demulcent, in chronic diarrhœa. Externally it is much employed for ointments and cerates.

*Dose.*—20 to 60 grs. boiled in milk, two or three times daily.

(In all the Pharmacopœias; Fr. Blanc de Baleine.)

### Preparation.

**UNGUENTUM CETACEI.** Cream colour.

Spermaceti, 5; White Wax, 2; Almond Oil, 20, or a sufficiency: melt together; stir constantly till it cools.

The Author finds 17 of Oil sufficient in summer.

(Austr. (Ceratum Cetacei) Spermaceti, White Wax, Oil of Almonds, equal parts; Belg. Spermaceti 3, White Wax 1, Olive Oil 12; U.S. (Ceratum Cetacei) Spermaceti 1, White Wax 3, Olive Oil 6; Russ. Spermaceti 3, White Wax 3, Olive Oil 14, Rose Water 2; Ger. (Ceratum Cetacei) Spermaceti 2, White Wax 2, Oil of Almonds 3; Dan. Spermaceti 3, White Wax 1, Oil of Almonds 24, Rose Water 12; all by weight. Not in Fr.)

A cool dressing, applied on lint. Red Oxide of Mercury changes less with this than with lard.

**Not Official.**

Mistura Cetacei.—Spermaceti, 60 grs.; Proof Spirit, 15 minims: finely pulverize the Spermaceti by aid of the spirit, and add by degrees half the yolk of an egg, at first only sufficient to make a stiff paste, which should be made very smooth by diligent trituration, then add the rest, and make up with water to 4 ounces.

*Dose.*—1½ oz. Given for coughs and irritation of the mucous membrane, has been prescribed for *sickness* during pregnancy, and was once a constant prescription immediately after delivery.

## CETRARIA.

### ICELAND MOSS.

The entire lichen, *Cetraria Islandica*, native of the north of Europe.

*Medicinal Properties.*

Demulcent, nutritious, and slightly tonic. Well calculated for affections of the mucous membrane of the lungs and bowels, with debility of the digestive organs or system generally. Useful in chronic catarrhs and other chronic pulmonary affections attended with copious purulent expectoration, in dyspepsia, chronic dysentery and diarrhœa, and in debility succeeding acute disease.

(In all the Pharmacopœias.)

**Preparation.**

**DECOCTUM CETRARIÆ.**

Iceland Moss, 1: first wash with cold water, then add Distilled Water, 20; boil ten minutes, strain whilst hot and wash the marc to make up 20. =(1 in 20).

*Dose.*—1 to 2 oz.

(U.S. 1 in 30; Belg. 1 in 25; Fr. (Tisane) 1 in 100; not in others.)

**Not Official.**

Iceland Moss Jelly.—Iceland Moss, 1; Water, 12: boil down to 6, strain, and add Sugar, 2.

Carrageen, or Irish Moss, is sometimes ordered in the place of Cetraria.

## CHARTA EPISPASTICA.

*See* CANTHARIDES.

## CHARTA NITRATA. Ger.

*See* Potassæ Nitras.

## CHARTA SINAPIS.

*See* SINAPIS.

Not Official.

## CHAULMOOGRA OIL.

*Vide* GYNOCARDIA.

## CHIRATA.

### CHIRETTA.

The entire plant, *Ophelia Chirata* (annual), collected in Northern India when the fruit begins to form.

*Medicinal Properties.*

The same as Gentian, but is a purer bitter, without aroma or astringency; given in dyspepsia of gouty subjects.

(U.S.; not in others.)

**Preparations.**

**INFUSUM CHIRATÆ.**

Chiretta, cut small, 1; Distilled Water (at 120° F.), 40; infuse half an hour and strain. =(1 in 40).

*Dose.*—1 to 2 oz.

(Not in other Pharmacopœias.)

Salts of iron may be given in this infusion when a strong bitter is desired as a vehicle.

**TINCTURA CHIRATÆ.** Very deep brown.

Chiretta, cut small and bruised, 1; Proof Spirit, 8; macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remaining spirit; when it ceases to drop, press, and wash the marc with proof spirit to make up 8. =(1 in 8).

*Dose.*—15 to 60 minims; Brit. Ph. dose ½ to 2 drms.

(Not in other Pharmacopœias.)

## CHLORAL HYDRAS.

### HYDRATE OF CHLORAL.

$C_2HCl_3O.H_2O$, eq. 165·5.

Chloral, produced by the action of dry chlorine gas on anhydrous alcohol, purified by treatment, first with sulphuric acid and afterwards with a small quantity of lime, and finally converted into the solid hydrate by the addition of water.

Solubility: soluble in less than its own weight of distilled water, rectified spirit, or ether, and in four times its weight of chloroform.

*Characters and Tests.*—In colourless crystals, which do not deliquesce on exposure to air. It has a pungent but not an acrid odour, and a pungent and rather bitter taste. On the application of a gentle heat it fuses to a colourless transparent liquid, which, as it cools, begins to solidify at a temperature of about 120° F. It boils in a test-tube, with pieces of broken glass immersed in it, at about 205° F., and at a slightly higher temperature it volatilizes on platinum foil without residue. The aqueous solution is neutral or but slightly acid to test-paper. A solution in chloroform, when mixed by agitation with sulphuric acid, does not impart colour to the acid. 100 grains of hydrate of chloral dissolved in an ounce of distilled water and mixed with 30 grains of slaked lime, submitted to careful distillation with a suitable apparatus, should yield not less than 70 grains of chloroform.

*Brit. Pharm. dose.*—5 to 30 grains.

3 oz. will dissolve in 1 oz. of water, and measure 2 fluid ounces and 5½ drachms; if to this be added 23 minims of water, every minim will contain a grain of chloral.

The solution keeps well, and is handy for dispensing.

Chloral was introduced in 1869, and Mr. Spencer Wells was one of the first to prescribe it.

### *Medicinal Properties.*

An excellent hypnotic, producing sound and placid sleep so much desired in eczema; suitable for hypochondriacal affections, chorea, nervous disturbances, and restlessness, where opium and Indian hemp disagree. Good also in asthma, whooping cough, delirium tremens, scarlet fever, diminishes the temperature of the body, has been found useful in idiopathic tetanus in doses 30 to 60 grains (*Lancet*, Dec. 31, 1870); also for cancer, 20 to 30 grain doses (*Lancet*, May 14 and June 4, 1870); 10 grs. three times a day (*Medical Times*, Dec. 31, 1870).

Dr. Tuke, after trying it on several maniacal patients with good results, reports, "Its advantages over other hypnotics are as follows: that it is more uniform in its action and its effects more lasting, it has no depressing influence, it does not constipate nor produce nausea."

Its great value in obstetric cases, see *Medical Times*, Jan. 1, 1870, *Lancet*, Sept 24, 1870; also in delirium tremens, *British Medical Journal*, July 16, 1870.

An admirable calming draught is made with 15 grs. Hydrate of Chloral, and 5 minims of solution of Bimeconate of Morphia.

Dr. Liebreich employs 7 grains, in solution, for subcutaneous injection.

Effects from an overdose or repeated overdoses are cramp in the legs, swimming in the head, flushed face, closed eyes, with injected conjunctiva, and in some cases death. Should not be given in Bright's disease, for it may produce Uremia.

ANTIDOTES.—$\frac{1}{20}$ of a grain of Picrotoxine has been found enough for 30 grains of Chloral. (*British Medical Journal*, April, 1875.)

Stomach pump or emetics, cold affusion to head and spine, electro-magnetism, artificial respiration.

(Ger. and Russ. Chloralum Hydratum Crystallisatum; Dan. and U.S.; not in others.)

### Preparation.

**SYRUPUS CHLORAL.**

Hydrate of Chloral, 80 grains; Water, ½ oz.; Syrup, to make 1 oz.; mix. =(1 gr. in 6 mins.).

*Dose.*—½ to 2 drms.

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Not Official.

## CROTON-CHLORAL HYDRATE.

$C_4H_5Cl_3O.H_2O$.

Is a very efficient remedy in pure neuralgia of the face and head, without causing drowsiness. It relieves dyspnœa of spasmodic asthma, and irritative cough of phthisis, or of chronic laryngitis.

Solubility, 1 in 44 of Water; 1 in 1 of Glycerine (very slowly); 1 in 1 of Rectified Spirit.

See a paper by Dr. Yeo in the *Lancet*, Jan. 31, 1874.

*Dose.*—1 to 2 grs. every hour or 2 hours, but may be increased to 5 or even 10 grs. if the patient bears it well.

Mistura.—Croton-Chloral Hydrate 4 grains, Glycerine 15 minims, Water to 1 ounce.—*Throat Hosp. Pharm.*

# CHLORI LIQUOR.

## SOLUTION OF CHLORINE.

Chlorine Gas dissolved in about half its volume of Water, and constituting ·6 per cent. by weight of the solution.

A yellowish-green liquid, smelling strongly of Chlorine.

Hydrochloric Acid, 6; Black Oxide of Manganese, in fine powder, 1; Distilled Water, 34: put the manganese into a gas-bottle, pour on it the acid mixed with 2 of the water; apply a gentle heat, and pass the gas through a bottle containing 2 more of water into the remainder of the water contained in a large bottle, which is to be kept cold till the gas ceases to come over; the bottle should then be closed by the hand and shaken till the gas is absorbed. Keep it in a green glass bottle and in a cool place.

*Test.*—Sp. g. 1·003. Evaporated, it leaves no residue. When 20 grains of Iodide of Potassium, dissolved in 1 ounce of distilled water, are added to 1 fluid ounce (439 grains by weight) of this preparation, the mixed solution acquires a deep red colour, which requires for its discharge 750 grain-measures of the volumetric solution of Hyposulphite of Soda, corresponding to 2·66 grains of Chlorine. Test explained under Calx Chlorata.

### *Medicinal Properties.*

Stimulant and antiseptic. Useful in advanced stages of scarlatina, typhoid fever, and chronic affections of the liver. Diluted, as a gargle in small-pox, scarlatina, and putrid sore throat. As a wash for ulcers, cancerous sores, buboes, and large abscesses. Dr. Scott, of India, gave it for biliary obstructions in conjunction with the Nitro-hydrochloric Acid baths.

*Dose.*—10 to 20 minims, in a wineglassful of water.

(In all the Pharmacopœias. Austr. and Belg. Aqua Chlori; U.S. Aqua Chlorinii; Ger. Aqua Chlorata (contains 4 per cent. of Gas); Fr. Chlore Dissous; Dan. Solutio Chlori; Russ. Chlorum Solutum.)

Incompatibles.—Salts of Lead and Silver.

Antidotes.—In case of poisoning by Chlorine Water, the antidotes are, Albumen, White of Egg, Milk, Flour.

**VAPOR CHLORI.** *See* CALX CHLORATA.

Not Official.

Liquor Chlori.—Chlorate of Potash, 30 grs.; Hydrochloric Acid, ½ oz.; Water ½ oz.: mix.—*London Hospital.*

# CHLOROFORMUM.

## CHLOROFORM.

$CHCl_3$, eq. 119·5.

*Syn.* Terchloride of Formyl.

It is a colourless, limpid, and volatile liquid, obtained by distillation from a mixture of Chlorinated Lime, Slaked Lime, and weak Spirit, the heat being very carefully applied. Burns, though not readily, with a green smoky flame.

Solubility, 10 in 7 of Rectified Spirit; 1 in 1½ of Ether; 1 in 200 of Water; freely in Olive Oil and Spirit of Turpentine. Will not dissolve in Glycerine.

Chloroform acts on vulcanite, and dissolves Caoutchouc, Gutta-percha, Mastic, Elemi, Tolu, Benzoin, and Copal. Amber, Sandarac, Lac, and Wax are only partially soluble. It also dissolves Iodine, Bromine, most of the organic alkaloids, the fixed and volatile oils, most resins and fats. It dissolves Sulphur and Phosphorus sparingly.

*Test.*—Sp. g. 1·490. Is not coloured on its being shaken with Sulphuric Acid. Dropped into water, it suddenly sinks and remains without opacity. It evaporates speedily, and leaves no residue and no unpleasant odour. Evolves no gas when Potassium is dropped into it.

Note.—Chloroform should not be prescribed with weak spirits or Glycerine, as it separates.

Mixed with strong spirits, Camphor Liniment, Soap Liniment, Olive Oil, or Oil of Turpentine, it dissolves perfectly, thus: Chloroform, Oil of Turpentine, of each 1, Soap Liniment 2, makes a clear liniment.

### *Medicinal Properties.*

Internally, a sedative, narcotic, and antispasmodic, given on sugar for sea-sickness. May be given as an antiperiodic, when Bark and Quinine fail to effect a cure. Externally, stimulant in senile gangrene and sloughing ulcers. The vapour is often applied to the eye, and also to the rectum or vagina. Its chief use, however, is to produce anæsthesia by inhalation during surgical operations, and the quantity required for each inhalation must depend on the duration of the operation to be performed. With Camphor relieves toothache. Externally, applied immediately after the sting of the wasp, takes away the pain and prevents further mischief. A powerful auxiliary to Liniments of Aconite, Belladonna, and Hyoscyamus.

*Dose.*—1 to 5 minims, with yolk of egg and mucilage, in syrup, or in a teaspoonful of brandy. *British Pharm. dose.*—3 to 10 minims.

(Belg. and Fr. sp. g. 1·480: U.S. Purificatum 1·480; Dan. Purum 1·490 to 1·494; Austr. 1·490 to 1·500; Ger. 1·492 to 1·496; Russ. 1·485 to 1·490.)

Antidotes.—In case of overdose of Chloroform, the antidotes are, fresh pure air and artificial respiration (*Med. Times*, August, 1874), and Nitrite of Amyl (*Lancet*, May 8, 1875).

## Preparations.

**AQUA CHLOROFORMI.**

Chloroform, 1 drm.; Distilled Water, 25 oz.: dissolve by shaking. =(1 in 200).

*Dose.*—½ to 2 oz.

**LINIMENTUM CHLOROFORMI.** Faint straw colour.

Chloroform, 1; Liniment of Camphor, 1: mix. =(1 in 2).

The oil in the Camphor Liniment prevents the evaporation of the Chloroform.

Stimulating on application to a tender skin. Should not be applied to the nape of the neck.

(Fr. Chloroform 1, Almond Oil 9; U.S. Chloroform 3, Olive Oil 4; not in others.)

**SPIRITUS CHLOROFORMI.** Colourless.

Chloroform, 1; Rectified Spirit, 19: dissolve. =(1 in 20).

Formerly called Chloric Ether, and of various strengths.

*Test.*—Sp. g. ·871.

*Dose.*—10 to 60 minims. 10 or 20 minims are frequently prescribed to give a sweetness to draughts, and to cover nauseous flavours.

(U.S. Chloroform 1 troy ounce, Alcohol 12 fl. ozs.; not in other Pharmacopœias.)

**TINCTURA CHLOROFORMI COMPOSITA.** Deep lake colour.

Chloroform, 2; Rectified Spirit, 8; Compound Tincture of Cardamoms, 10: mix. =(1 in 10).

*Dose.*—20 to 60 minims.

The Chloroform will separate if this Tincture is prescribed in too little water.

### Not Official.

Liquor Chloroformi Camphoratus.—Camphor, 1; Chloroform, 2: dissolve.

A remedy for toothache, and topically applied for rheumatism.

Liquor Chloroformi Compositus.—Chloroform, 4 oz.; Ether, 1 oz.; Rectified Spirit, 4 oz.; Treacle, 4 oz.; Extract of Liquorice, 2½ oz.; Muriate of Morphia, 8 grs.; Oil of Peppermint, 16 minims; Syrup, 17½ oz.; Prussic Acid (2 per cent.), 2 oz.: dissolve the Muriate of Morphia and the Oil of Peppermint in the Rectified Spirit; mix the Chloroform and Ether with this solution; dissolve the Extract of Liquorice in the Syrup, and add the Treacle; shake these two solutions together and add the Prussic Acid.

*Dose.*—5 to 10 minims.

Mistura Chloroformi c. Ammoniâ.—Spirit of Chloroform, 15 minims; Carbonate of Ammonia, 3 grs.; Decoction of Yellow Bark, 1 oz. *Dose*, 1 oz.—*London Ophthalmic Hospital.*

Unguentum.—Chloroform, 1; Lard, 2: blend quickly by trituration.

Vapor.—Chloroform, 15 minims for one inhalation.

Tetrachloride of Carbon, sp. g. 1·590. Has been used to produce anæsthesia; its action is said to be effective and pleasant to the patient.

Bichloride of Methylene.—Introduced by Dr. Richardson in November, 1867. It is a limpid dense fluid, sp. g. 1·395; when dropped into water about one-fourth of it is dissolved, the remainder separates like chloroform at the bottom of the vessel as a perfectly clear and distinct fluid, and the whole has a sweet pleasant odour, without the least smell of ether. It is now used in the larger operations.

Dr. Day says that it has the advantage over chloroform in that it is less apt to cause sickness, is more agreeable to inhale, and causes less excitement preparatory to the stage of anæsthesia; rarely more than 3 to 4 drms. are required for an operation lasting half an hour, and consciousness returns in a few seconds after inhalation is discontinued. He uses Dr. Junker's inhaler.

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# CINCHONA.

## CINCHONA BARK.

From Peru and the western coast of South America.

The Peruvian bark was known in Europe as early as 1640, on account of its having cured the Countess of Chinchon of a fever. We are ignorant of its early history, and how the Spaniards in Peru became acquainted with its virtues; but the Jesuits secretly conveyed it from Peru to Spain—hence it was called the Jesuits' Bark. Little was further known of it until the time of La Condamine, who visited Peru in 1738, and after whom Humboldt and Bonpland named the plant the *Cinchona Condaminea*. It was long supposed that only one species existed; a vast number, however, have been discovered, all of which possess medicinal properties, though varying much, both according to their species and the locality of their growth. It has been distinguished in our Pharmacopœias by its colour. The names of only three are now retained—*Cinchona flava*, *C. pallida*, and *C. rubra*.

The Yellow Bark of Calisaya contains a fatty matter, cinchonic red, a yellow colouring matter, Tannin, a soluble red colouring matter, Starch, Lignin, Kinate of Lime, and *Kinate of Quinia, with a comparatively small proportion of Kinate of Cinchonia*. Procured from the forests of Southern Peru.

The Pale Bark of Loxa (*C. Condaminea*) contains a fatty matter, the insoluble red colouring matter, the yellow colouring matter, Tannin, Starch, Gum, Lignin, Kinate of Lime, *Kinate of Cinchonia, with a very minute proportion of Kinate of Quinia*. From the forests of Loxa, in the republic of Ecuador.

Red Bark contains the fatty matter, a large quantity of the cinchonic red, the yellow colouring matter, Tannin, Starch, Lignin, Kinate of Lime, and *a large proportion both of Kinate of Quinia and Kinate of Cinchonia*. From the forests at the foot of Chimborazo.

### *Medicinal Properties.*

Cinchona Bark is a decided tonic, with some degree of astringency. It is especially useful in fevers of a remittent and intermittent character, when it should be given, in full doses, shortly before the cold stage. It has been found highly beneficial in many chronic cases, although intermissions do not occur; chronic and pulmonary catarrh, chronic diarrhœa, and in every case of direct debility. It is the most valuable remedy in neuralgia, and one of the most reliable medicines to relieve erysipelas in convalescence from acute diseases. The Pale Bark appears to be best suited to commence with when the stomach is weak and irritable, containing chiefly Quinidia and Cinchonia. The Yellow, however, is a more reliable tonic when the stomach will bear its use. The Red Bark, containing both Cinchonia and Quinia, has been thought, by Dr. Rigby, to be on the whole the most serviceable.

Powdered Bark was used in the Franco-German war to stanch blood.

An almost white powder was sold in India as the Government Cinchona Febrifuge, which had an average percentage composition of 15·5 crystallizable Quinine, 33·5 Cinchonine, 29 Cinchonidine, 17 Amorphous Alkaloid, 5 colouring matter.

It has been suggested to mix the crystalline salts in the proportion of 4 parts of Sulphate of Quinine, 8 parts of Sulphate of Cinchonidine, 9 parts of Sulphate of Cinchonine.

The results of experiments in India proved that Sulphate of Quinidine was quite equal to Sulphate of Quinine in therapeutic value, and Sulphate of Cinchonidine very nearly so; and that Sulphate of Cinchonine, while possessing valuable febrifuge properties, was in large doses apt to cause nausea, vomiting, and derangements of the bowels, and was not quite so speedy in its action in arresting periodic fevers as the other alkaloids; that in nine-tenths of the fever cases of India Cinchonidine is just as efficient as Quinine, and only about one-fourth of the cost.—*Cinchona Committee's Report*, 31 August, 1878.

1 part of Quinine dissolves in about 20 parts of Ether.
1 part of Quinidine dissolves in about 30 parts of Ether.

A strong solution of either of the above gives with Chlorine Water and Liquid Ammonia a green precipitate; in a dilute solution only a green coloration is produced.

1 part of Cinchonidine dissolves in about 100 parts of Ether.
1 part of Cinchonine dissolves in about 1000 parts of Ether.

Solutions of these, if pure, do not give a green precipitate or coloration with Chlorine Water and Ammonia.

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## CINCHONÆ FLAVÆ CORTEX.

### YELLOW-CINCHONA BARK.

The Bark of *Cinchona Calisaya*, collected in Bolivia and Southern Peru, formerly called *Cordifolia*. First used in England in 1790.

It yields 2·3 to 2·5 per cent. of Quinia.

There are several kinds of Yellow Bark which are of an inferior kind. It would be well, therefore, to try them by the Pharmacopœia test, which is as follows:—

*Test.*—Boil 100 grains of the Bark, reduced to a very fine powder, for a quarter of an hour, in 1 fluid ounce of distilled water, acidulated with 10 minims of Hydrochloric Acid, and allow it to macerate for twenty-four hours. Transfer the whole to a small percolator, and after the fluid has ceased to drop, add at intervals about 1½ ounces of similarly acidulated water, or until the fluid which passes through is free from colour. Add to the percolated fluid Solution of Subacetate of Lead until the whole of the colouring matter has been removed, taking care that the fluid remains acid in reaction. Filter and wash with a little Distilled Water. To the filtrate add about 35 grains of Caustic Potash, or as much as will cause the precipitate which is at first formed to be nearly redissolved, and afterwards 6 fluid drachms of pure Ether. Then shake briskly, and having removed the Ether, repeat the process twice with 3 fluid drachms of Ether, or until a drop of the Ether employed leaves on evaporation scarcely any perceptible residue. Lastly evaporate the mixed ethereal solutions in a capsule. The residue, which consists of nearly pure Quinia, when dry, should weigh not less than 2 grains, and should be readily soluble in Diluted Sulphuric Acid.

*Dose.*—15 grs. as a tonic; 60 to 120 grs. in ague. May be combined with mineral acids.

INCOMPATIBLES.—Ammonia, Lime Water, Metallic Salts, and Gelatine.

## Preparations.

**DECOCTUM CINCHONÆ FLAVÆ.**

Yellow-Cinchona Bark, in coarse powder, 1¼; Distilled Water, 20: boil ten minutes; when cold, strain, and pour on the marc sufficient water to make up 20. =(1 in 16).

The decoction thus made extracts only about half the active principle of the bark; the marc retains about the same quantity of Quinia as is found in the decoction. Formerly the Decoction was ordered to be strained while hot, and a large deposit fell on cooling; this deposit, however, contained only $\frac{1}{16}$ of the active part of the bark, and now, by straining when cold, this is rejected.

*Dose.*—1 to 2 ozs.

(Same as U.S., but strained whilst hot; Belg. 1 in 10; Russ. with Sulphuric Acid; not in others.)

**EXTRACTUM CINCHONÆ FLAVÆ LIQUIDUM.** Intense brown.

Yellow-Cinchona Bark, in coarse powder, 16; Distilled Water, a sufficiency; Rectified Spirit, 1: macerate the bark in 40 of water for twenty-four hours, stirring frequently, then pack in a percolator, and add water until 240 have passed through, or until the bark is exhausted. Evaporate the liquor to 20 at a temperature not exceeding 160° F., then filter and continue the evaporation to 3, or until the sp. g. of the liquid is 1·200; when cold, add the spirit gradually, constantly stirring. Sp. g. 1·100.

1 part of this extract is equal to 4 of Bark.

*Dose.*—10 to 30 minims.

(U.S. consists of ¼ part Glycerine; the fluid oz. = 1 oz. Bark; not in others.)

**INFUSUM CINCHONÆ FLAVÆ.**

Yellow-Cinchona Bark, in coarse powder, 1; boiling Distilled Water, 20: infuse two hours, and strain. =(1 in 20).

*Dose.*—1 to 2 ozs.

This is cleaner on the palate than the Decoction, and equal in power.

(U.S. with Aromatic Sulphuric Acid; Fr. (Tisane), 1 in 50; not in others.)

**TINCTURA CINCHONÆ FLAVÆ.** Deep reddish-brown; deposits much when kept.

Yellow-Cinchona Bark, in moderately fine powder, 4; Proof Spirit, 20; macerate forty-eight hours with 15 of the spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remaining spirit, and when it ceases to drop, press, and add sufficient proof spirit to make 20. =(1 in 5).

*Dose.*—½ to 2 drachms.

(U.S. about 1 in 4 by weight; Dan. Tinctura Chinæ Calisayæ; Ger. and Russ. Tinctura Chinæ (both from China fusca); Belg. Tinctura Chinæ Flavæ; Fr. Teinture de Quinquina; all 1 in 5 and by weight; not in Austr.)

**QUINIÆ SULPHAS.** *See* QUINIÆ SULPHAS.

### Not Official.

Mistura Cinchonæ Composita.—Carbonate of Ammonia, 4 grs.; Decoction of Bark, 1 oz.—*Charing Cross Hospital.*

Mistura Cinchonæ c. Acido.—Diluted Sulphuric Acid, 10 mins.; Decoction of Bark, 1 oz.—*St. Thomas's Hospital.*

Haustus Cinchonæ Comp.—Liquid Extract of Bark, 20 mins.; Chlorate of Potash, 15 grs.; Spirit of Chloroform, 10 mins.; Water 1½ oz.; mix. This taken every 2 hours cures coryza, cold in the head.

Vinum Chinæ (Ger.).—Bark, 5; Port Wine, 100: digest 8 days and filter.

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## CINCHONÆ PALLIDÆ CORTEX.

### PALE-CINCHONA BARK.

The bark of *Cinchona Condaminea*, collected about Loxa, in Ecuador.

*Test.*—200 grains of the bark treated in the manner directed in the test for Yellow-Cinchona Bark, with the substitution of Chloroform for Ether, should yield not less than 1 grain of alkaloids; chiefly Cinchonia and Quinidia, which are dissolved by Chloroform.

*Dose.*—10 to 60 grs.

Contained in Mist. Ferri Aromatica.

### Preparation.

**TINCTURA CINCHONÆ COMPOSITA.** Deep red; deposits slightly.

Pale-Cinchona Bark, in moderately fine powder, 4 ozs.; Bitter Orange Peel, cut small and bruised, 2 ozs.; Serpentary, bruised, 1 oz.; Saffron, 120 grains; Cochineal, 60 grains; Proof Spirit, 40 ozs.; macerate forty-eight hours with 30 ozs. of spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remainder of the spirit; when it ceases to drop, press, and add sufficient proof spirit to make up 40 ozs. =(1 in 10).

*Dose.*—½ to 2 drms.

(Fr. gives the British formula; Belg. resembles the British formula; U.S. with Red Bark; Dan. Belg. Ger. and Russ. Tinct. Chinæ Comp. with Gentian, Orange Peel, and Cinnamon; not in Austr.)

### Not Official.

(Huxham's Original Formula for Tincture of Bark in 1788.)

Powdered Peruvian Bark, 4 oz.; Orange Peel, 3 oz.; Serpentary Root, 80 grs.; Saffron, 160 grs.; Cochineal, 80 grs.; Brandy, 40 oz.; digest 3 or 4 days.

## CINCHONÆ RUBRÆ CORTEX.

### RED-CINCHONA BARK.

The bark of *Cinchona succirubra*, formerly called *Oblongifolia*, collected on the western slopes of Chimborazo.

*Test.*—100 grains of the bark treated in the manner directed in the test for Yellow-Cinchona Bark, with the substitution of Chloroform for Ether, yield not less than 1·5 grains of alkaloids. Chloroform dissolves all the alkaloids of Cinchona Bark.

As to *Red Bark*, the thick flat sort contains only 3 to 4 per cent. of alkaloids, but a large amount of colouring matter. The quill Red Bark of the Indian plantations is a much better drug, some of it yielding 5 to 10 per cent. of alkaloids, less than a third of which is quinine and a fourth cinchonidine, the remainder being cinchonine, and sometimes also traces of quinidine. (Hanbury.)

**Incompatibles.**—Ammonia, Lime Water, Metallic Salts, Gelatine.

### Not Official.

Quill Red-Cinchona Bark 16 ounces, digested and afterwards percolated with a sufficient quantity of equal parts Rectified Spirit and Distilled Water, the percolate evaporated to 7½ fl. oz., and ½ fl. oz. Rectified Spirit added to make 8 fl. oz. This preparation has been largely used by dypsomaniacs, but in *Brit. Med. Jl.*, p. 646, April 24, and *Lancet*, p. 938, June 12, 1880, its use is discouraged.

**Infusum Chinæ Frigide Paratum** (Russ.). Powder of Red Bark, 18; Distilled Water, 144; Phosphoric Acid (sp. g. 1·130), 1.

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## CINNAMOMI CORTEX.

### CINNAMON BARK.

The inner bark of shoots from the truncated stocks of *Cinnamomum Zeylanicum*, imported from Ceylon, and distinguished in commerce as Ceylon Cinnamon.

### *Medicinal Properties.*

Warm and cordial to the stomach, carminative and astringent, chiefly used as an adjuvant to other medicines. Often employed in diarrhœa, with chalk. Efficacious in internal hemorrhage.

*Dose* of the powder, 10 to 20 grs.

(In all the Pharmacopœias; Fr. Cannelle.)

Contained in Acidum Sulphuricum Aromaticum, Decoctum Hæmatoxyli, Infusum Catechu, Pulv. Catechu Co., Pulv. Cretæ Aromaticus, Pulv. Kino Compositus, Tinct. Cardam. Co., Tinct. Catechu, Tinctura Lavandulæ Comp., Vinum Opii.

### Preparations.

**AQUA CINNAMOMI.**

Cinnamon, bruised, 1; Water, 16: distil 8. =(1 in 8).

*Dose.*—1 to 2 oz.

(Austr. Belg. Dan. Ger. and Russ. 1 in 10; Fr. Eau de Cannelle, 1 in 4; U.S. made with oil, 1 min. to 1 oz.)

**OLEUM CINNAMOMI.** Yellowish when recent, gradually becoming red.

The oil distilled from Cinnamon bark; imported. Sinks in water. Sp. g. 1·005—1·050.

Possesses the carminative qualities of Cinnamon without its astringency.

*Dose.*—1 to 4 minims in pill, with powdered Mastic, or in sugar, or emulsion.

(In all the Pharmacopœias.)

**PULVIS CINNAMOMI COMPOSITUS.** Dark fawn.

Cinnamon, 1; Cardamoms, 1; Ginger, 1, all in powder: mix. =(1 in 3).

*Dose.*—3 to 10 grs.

(Called Pulvis Aromaticus in the foreign Pharmacopœias. Belg. gives Brit. Ph. formula; U.S. Cinnamon 2, Ginger 2, Cardamoms 1, Nutmeg 1; Ger. Cinnamon 5, Cardamoms 3, Ginger 2; Russ. Cinnamon 4, Cloves, Mace, Nutmeg, Ginger, of each 1; not in others.)

**TINCTURA CINNAMOMI.** Deep brown.

Cinnamon, in coarse powder, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remaining spirit; when it ceases to drop, press, and add sufficient proof spirit to make up 8. =(1 in 8).

*Dose.*—½ to 2 drms.

(U.S. about 1 in 10; Austr. Belg. Dan. Fr. Ger. and Russ. 1 in 5; all by weight.)

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Not Official.

## COCA.

The leaves of *Erythroxylon Coca*, from Bolivia. They resemble the leaves of tea, but have a slightly visible curved line on each side of the midrib.

They are chewed by the natives to sustain them during the day, that they may defer eating till the evening. The author has been presented with some of it by Dr. Sieveking, and it has been tried, but the reports from the several experimenters in this country are not promising; it is said to produce a gentle exciting effect, with a disposition to sleep, not followed by languor or depression.

An extract is made from the fresh plant and imported into this country.

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## COCCUS.

### COCHINEAL.

The female insect, *Coccus Cacti*, dried; reared in Mexico and Teneriffe.

(U.S. Coccus; Belg. Dan. Ger. and Russ. Coccionella; Fr. Cochenille; not in Austr.)

*Medicinal Properties.*

Anodyne, given in whooping cough.

### Preparation.

**TINCTURA COCCI.** Lake colour.

Cochineal, in powder, 1; Proof Spirit, 8: macerate seven days, agitating occasionally; strain, press, filter, and add sufficient proof spirit to make up 8. =(1 in 8).

*Dose.*—30 to 90 minims twice a day. (Used chiefly for colouring medicines.)

(Belg. 1 in 5; Fr. 1 in 10; by weight; not in others.)

### Not Official.

**Mixture for Whooping Cough.**—Cochineal, 10 grs.; Subcarbonate of Potash, 20 grs.; Sugar, 1¼ oz.; Water, 4 oz.: rub together and strain.

*Dose.*—15 minims four times a day for a child one year old; 30 minims, two years; 60 minims, four years.

Boiled apples in milk given for the food.

**Carmine**, prepared from Cochineal, an excellent colouring agent for powders and ointments.

## COLCHICI CORMUS.*

COLCHICUM CORM.

The fresh corm of *Colchicum autumnale* (collected about the end of June or early in July), stripped of its coats, sliced transversely, and dried at a temperature not exceeding 150° F.

*Test.*—Best tested by its bitterness.

### *Medicinal Properties.*

Produces increased action of some of the secreting organs: the action of the skin is also increased; that of the heart diminished. Employed chiefly in gout, possessing a power of controlling the pain and inflammation. Affords relief in acute rheumatism and other inflammatory affections. May be used combined with other purgatives in cases of imperfect action of the liver. It has also been used in dropsy. It is apt to produce depression if given on an empty stomach. The Acetic Extract is frequently prescribed with Dover's Powder to relieve painful gout.

*In very large doses Colchicum is a powerful stimulant of the liver and intestine. It renders the bile more watery, but increases the secretion of biliary matter proper.—Dr. Rutherford.*

*Dose* of the powder, 2 to 8 grs. every 4 or 6 hours.

(Belg. Fr. and U.S.; not in others.)

**Incompatibles.**—Tincture of Iodine, Guaiacum, and all astringent preparations.

**Antidotes.**—In case of poisoning with Colchicum, emetics followed by demulcent drinks, and, if coma be present, Brandy, Ammonia, Coffee, and other powerful stimulants may be given.

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* It is biennial. The young corm (an offset of the old one) first appears about the end of June, it flowers late in autumn, the impregnated germen remains latent under ground quite close to the bulb until the following spring, when the capsule rises above the surface, accompanied by several long upright leaves, the seeds ripening in June; after which the leaves decay. The corm is considered to be most active when it is a year old, that is about July.

### Preparations.

**EXTRACTUM COLCHICI.** Dark brown.

The expressed juice of fresh Colchicum Corms (deprived of their coats), cleared of deposit, heated to 212° F., strained, and evaporated to a pill consistence at a temperature of 160° F.

100 pounds of Corms yield 4 pounds of Extract.

*Dose.*—½ to 2 grs.

(Not in other Pharmacopœias. Belg. Alcoholic Extracts of Corm and Seeds; Fr. Alcoholic Extract of Seeds; U.S. Fluid Extracts of Corm and Seeds.)

**EXTRACTUM COLCHICI ACETICUM.** Dark brown, and pungent odour.

Crushed fresh Corms, previously peeled, 112; Acetic Acid, 6: stir together, press, and after subsidence heat the clear liquor to 212° F., strain through flannel, and evaporate at 160° F. to a soft extract.

100 pounds of Corms yield 5½ pounds of Extract.

*Dose.*—½ to 2 grs., in pill, with an equal weight of Liquorice Powder.

(U.S.; not in others.)

**VINUM COLCHICI.** Light brown, deposits much.

Colchicum Corms, sliced, dried, and bruised, 4; Sherry, 20; macerate seven days, agitating occasionally, strain, and add Sherry to make up to 20. =(1 in 5).

(U.S. 1 and 2·5 Sherry; Fr. 1 and 16·6 Malaga; the following are made with the Seeds:—Austr. 1 and 5 Malaga; Belg. 1 and 6·6 Malaga and Spirit; U.S. 1 and 7·5 Sherry; Dan. Ger. and Russ. 1 and 10 Sherry; Fr. 1 and 16·6 Malaga.)

*Dose.*—10 to 30 minims.

#### Not Official.

MISTURA COLCHICI.—Wine of Colchicum, 20 mins.; Carbonate of Magnesia, 10 grs.; Pimento Water, 1 oz. *Dose*, 1 oz.—*London Ophthalmic.*

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## COLCHICI SEMINA.

### COLCHICUM SEEDS.

The seed, fully ripe (gathered about the end of July).

### *Medicinal Properties.*

Similar to those of the corm, but considered by some to be superior both in certainty of effect and mildness of operation.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

### Preparation.

**TINCTURA COLCHICI SEMINUM.** Light brown.

Colchicum Seeds, bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, and let it drain, then pour on the remainder of the spirit; when it ceases to drop, press, filter, and add sufficient proof spirit to make up 8. =(1 in 8).

*Dose.*—10 to 30 minims.

(U.S. 1 and 7; Austr. and Belg. 1 and 5; Dan. Fr. Ger. and Russ. 1 and 10; all by weight.)

Not Official.

**Mistura Colchici Alkalina.**—Tincture of Colchicum Seeds, 20 minims; Bicarbonate of Potash, 10 grs.; Pimento Water, 1 oz.—*London Hospital.*

**Mistura Colchici Aperiens.**—Tincture of Colchicum Seeds, 15 minims; Carbonate of Magnesia, 6 grs.; Sulphate of Magnesia, 30 grs.; Peppermint Water, to 1 oz.—*University Hospital.*

**Tinctura Colchici Composita.**—Colchicum Seeds, bruised, 1; Aromatic Spirit of Ammonia, 8: macerate for seven days, then press and strain.

*Dose.*—15 to 30 minims.

**Vinum Seminum Colchici** (Dan. Ger. and Russ.).—Seeds, 1; Sherry, 10: digest eight days.

*Dose.*—20 minims.

**Tinctura Colchici Florum.**—Fresh Flowers, 2; Rectified Spirit, by weight, 1: digest seven days.

*Dose.*—10 to 30 minims. This preparation closely resembles the Eau Médicinale, and is considered by some medical men to be the most effective preparation of any.

## COLLODIUM.

### COLLODION.

Pyroxylin, 1; Ether, 36; Rectified Spirit, 12: mix the ether and spirit, and add the pyroxylin. In a few days decant the clear solution.

(Belg. Pyroxylin 1, Ether 29, Rectified Spirit 2½; Dan. Ger. and Russ. Pyroxylin 1, Ether 18, Rectified Spirit 3; Fr. Pyroxylin 1, Ether 9, Spirit 3, Castor Oil 1; all by weight; U.S. Pyroxylin 1, Ether 28·5, Rectified Spirit 8, by measure.)

*Test.*—Colourless and highly inflammable, with ethereal odour; it dries rapidly upon exposure to the air, and leaves a thin transparent film, insoluble in Water or Rectified Spirit. Poured on the skin, contracts in drying.

**COLLODIUM FLEXILE.** Colourless.

Collodion, 6 ozs.; Canada Balsam, 120 grains; Castor Oil, 1 drm.: mix. Applied to burns, ulcers, and abrasions of the skin. It does not contract in drying.

(U.S. nearly same proportions; Ger. and Russ. Collodium Elasticum, Collodion 50, Castor Oil 1; Dan. Collodion 99, Castor Oil 1.)

### *Medicinal Properties.*

Chiefly used for coating diseased or wounded parts with a protecting film. Applied to erysipelas when caused by internal injury, such as wounds, &c.

### Not Official.

**Styptic Colloid.** (Dr. Richardson's.)—A Saturated Solution of Tannic Acid and Xyloidine or Gun-Cotton in Absolute Alcohol and Pure Ether. In the first step of the process, the Tannic Acid, rendered as pure as it can be, is treated with Absolute Alcohol, and digested in it for several days. Then the Pure Ether, also absolute, is added until the whole of the thick Alcoholic Mixture is rendered quite fluid. Lastly the Xyloidine is added until it ceases readily to dissolve. A little Benzoin may be added to give an agreeable odour to the Colloid.

It can be applied directly with a brush, or mixed with an equal quantity of ether, and used in the form of spray.

**Hæmostatic Collodion.** (Dr. Pavisi's.)—Collodion, 100; Carbolic Acid, 10; Tannic Acid, 5; Benzoic Acid, 5: dissolve. Is applied by means of a pencil, or by soaking strips of linen in it.

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# COLOCYNTHIDIS PULPA.

## COLOCYNTH PULP.

The dried and decorticated fruit of *Citrullus Colocynthis*, freed from the seeds; imported chiefly from Smyrna, Trieste, France, and Spain.

100 parts of the finest decorticated Turkey Colocynth yield 34 parts of pulp and 66 parts of seeds.

### *Medicinal Properties.*

It is a powerful drastic hydragogue cathartic, dangerous in large doses. Used in obstinate constipation.

*In large doses a powerful hepatic as well as intestinal stimulant; it renders bile more watery, but increases the secretion of biliary matter.—Dr. Rutherford.*

*Dose.*—2 to 8 grs. Seldom prescribed alone; generally in combination, as in Pil. Coloc. Co.

(In all the Pharmacopœias; Fr. Coloquinte.)

### Preparations.

**EXTRACTUM COLOCYNTHIDIS COMPOSITUM.** Black.

Colocynth pulp, free from seeds, 6; Extract of Socotrine Aloes, 12; Resin of Scammony, in powder, 4; Hard Soap, in powder, 3; Cardamom seeds, in fine powder, 1; Proof Spirit, 160: macerate the colocynth in the spirit for four days; press out the tincture, distil off the spirit, and add to it the extract of aloes, the soap, and the scammony; then evaporate by a water bath to a pilular consistence, adding the cardamoms towards the end of the process.

The product weighs 24, therefore in every 6 of Extract. Coloc. Compos. there is the power of 1½ of pulp = Simple Extract ½, Extract of Aloes 3, Resin of Scammony 1, Hard Soap ¾, Cardamoms ¼, Water ½.

*Dose.*—2 to 5 grs. with 2 or 3 grs. of Extract of Hyoscyamus, to prevent griping.

(Fr. Brit. formula; U.S. Extract Colocynth 3½, Purified Aloes 12, Resin Scammony 3, Cardamom 1½, Soap 3; Ger. and Russ. Extract Colocynth 3, Aloes 10, Scammony 8, Extract of Rhubarb 5; not in others. Austr. Belg. Dan. Fr. Ger. Russ. and U.S. have Simple Extract made with alcohol.)

**PILULA COLOCYNTHIDIS COMPOSITA.** Black.

Colocynth pulp, in powder, 1; Barbadoes Aloes, in powder, 2;

Scammony, in powder, 2; Sulphate of Potash, in powder, ¼; Oil of Cloves, ¼; Distilled Water, a sufficiency (about ¼): mix.
=(about 1 in 6).

Made with Water as directed, the pill soon becomes hard—Syrup or Glycerine would have been better.

*Dose.*—5 to 10 grs. (Dr. Gregory's favourite pill.)

(Fr. Colocynth in powder 10, Barbadoes Aloes 10, Scammony 10, Honey 30, Oil of Cloves ·05; not in other Pharmacopœias.)

**PILULA COLOCYNTHIDIS ET HYOSCYAMI.** Black.

Colocynth, in powder, 1; Barbadoes Aloes, in powder, 2; Scammony, in powder, 2; Sulphate of Potash, in powder, ¼; Oil of Cloves, ¼; Extract of Hyoscyamus, 3; Distilled Water, a sufficiency: mix.
=(Pil Coloc. Co. 6; Extr. Hyos. 3).

*Dose.*—5 to 10 grs. (Dr. Christison's favourite pill.)

(Not in other Pharmacopœias.)

Not Official.

TINCTURA COLOCYNTHIDIS. (Ger. and Russ. Ph.)—Colocynth pulp, in coarse powder, 1; Rectified Spirit, 10.

*Dose.*—10 to 15 minims three times a day.

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## CONFECTIONES.

### CONFECTIONS.

The following are now contained in the British Pharmacopœia, the formulas for which will be found under the names of the substances from which they are prepared:—

CONFECTIO OPII. 1 of powder of Opium in 40. Dose 5 to 20 grs.
CONFECTIO PIPERIS. Dose, 1 to 2 drms.
CONFECTIO ROSÆ CANINÆ.
CONFECTIO ROSÆ GALLICÆ. } Dose, 1 drm. or more.
CONFECTIO SCAMMONII. Dose, 10 to 30 grs.
CONFECTIO SENNÆ. Dose, 1 to 2 drms.
CONFECTIO SULPHURIS. Dose, 1 to 2 drms.
CONFECTIO TEREBINTHINÆ. Dose 1 to 3 drms. for adults, 1 drm. for children.

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## CONII FOLIA.

### HEMLOCK LEAVES.

The fresh leaves and young branches of Spotted Hemlock, *Conium maculatum* (annual), gathered in June, from wild British plants, when the fruit begins to form; also the leaves carefully dried.

*Test.*—The leaf rubbed with Solution of Potash gives out strongly the odour of Conia.

### *Medicinal Properties.*

Powerfully narcotic; anodyne, antispasmodic, and deobstruent. Used in chronic enlargement of the liver, chronic rheumatism, syphilis, neuralgic affections; allays the cough in bronchitic affections, pertussis, and phthisis. In the case of animals poisoned by Hemlock the brain is found free from engorgement, which shows that its action on that organ must be very different from the action of Opium. May be applied externally in the form of a cataplasm to ease pain, especially in cancer.

*Dose.*—2 to 8 grs. in powder.

INCOMPATIBLES.—Caustic Alkalies, Vegetable Acids, and Astringents.

ANTIDOTE.—In case of poisoning by Hemlock, emetics followed by stimulants internal and external, artificial respiration long continued.

## Preparations.

**CATAPLASMA CONII.**

Hemlock Leaves, in powder, 1 oz.; Linseed Meal, 3 ozs.; boiling Water, 10 ozs.: mix the first two ingredients and add them to the water gradually, constantly stirring. (For 1 Cataplasm).

(In no other Pharmacopœia.)

**EXTRACTUM CONII.** Intense green when freshly made; gets brown by keeping.

Inspissated juice of the fresh plant, prepared as directed for Extractum Belladonnæ.

100 lbs. plant yield 50 lbs. juice = from 55 to 60 ozs. extract; 100 lbs. leaves, when dried, weigh 21 lbs.

*Dose.*—2 to 8 grs.

(Austr. clarified juice of fresh herb evaporated; Belg. juice from leaves evaporated to dryness, also clarified juice evaporated and mixed with powdered leaves; also alcoholic from bruised herb; Dan. made from herb with dilute spirit and water; Fr. from clarified juice of fresh leaves, also alcoholic from dried leaves and alcoholic from seeds; Ger. made with water and spirit from fresh herb; Russ. aqueous from herb; U.S. from clarified juice, also alcoholic from dried leaves, and a fluid extract from seeds.)

**PILULA CONII COMPOSITA.** Dark olive.

Extract of Hemlock, 5; Ipecacuanha, 1; Treacle sufficient to form a mass.

*Dose.*—5 to 10 grs.

(Not in other Pharmacopœias.)

**SUCCUS CONII.** Light brown.

Express the juice from bruised fresh leaves; to every 3 measures of juice add 1 of Rectified Spirit. Filter after seven days.

12 minims = 1 grain of extract.

*Dose.*—30 to 60 minims; but sometimes given in larger doses.

(U.S. Juice 5, Alcohol 1; Belg. clarified, but without spirit; Fr. without spirit; not in others.)

**VAPOR CONIÆ.—INHALATION.**

Extract of Hemlock, 60 grains; Solution of Potash, 1 fluid drm.; Distilled Water, 10 fluid drms.: mix.

Put 20 minims of the mixture on a sponge, in a suitable apparatus, so that the vapour of hot water passing over it may be inhaled.

(Not in other Pharmacopœias.)

Not Official.

**Mistura Conii c. Hyoscyamo.**—Juice of Conium, 30 minims; Extract of Henbane, 5 grs.; Mucilage, 2 drms.; Water to 1 oz.—*Chest Hospital.*

**Liniment. Conii.**—Extract, 2; Rectified Spirit, 8: triturate thoroughly, and filter.

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## CONII FRUCTUS.

### HEMLOCK FRUIT.

The ripe fruit of *Conium maculatum* (gathered in July) dried.

*Medicinal Properties.*

Narcotic and somewhat sedative to the circulation. Used in the same cases as Conii Folia.

**Preparation.**

**TINCTURA CONII.** Brown.

Hemlock Fruit, dried and bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remaining spirit; when it ceases to drop, press, mix, filter, and add sufficient proof spirit to make up 8. =(1 in 8).

*Dose.*—½ to 1 drm.

(Belg. Tinct. Cicutæ, 1 in 5; Fr. and U.S. from dried leaves; not in others.)

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## COPAIBA.

### COPAIVA.

The Oleo-Resin obtained by incision from the trunk of *Copaifera multijuga*, and other species of Copaifera; chiefly from the valley of the Amazon.

A transparent liquid, varying in colour from a light yellow to a golden brown. Sp. g. ·940—·995.

Soluble in absolute Alcohol, Ether, and the fixed and volatile Oils.

*Test.*—Soluble in an equal volume of Benzol, insoluble in Water; does not gelatinize at 270° F.; is not fluorescent.

*Medicinal Properties.*

Stimulant. Acts upon the mucous membrane, more particularly on that of the genito-urinary organs and of the rectum. Used in gonorrhœa and gleet. Useful in chronic bronchitis when there is excessive mucous secretion.

To be avoided in febrile states of the system.

*Dose.*—20 to 60 minims three times a day.

(In all the Pharmacopœias; Fr. Copahu.)

Given floating on aromatic water, or sometimes with Spirit of Nitrous Ether. A less disagreeable form is that of emulsion, prepared by rubbing the Copaiva first with mucilage, or the yolk of an egg and sugar, and then with some aromatic water.

Both Copaiva and the Oil can be rendered emulsive by trituration with mucilage. 1½ oz. of mucilage should be used for every ounce of Copaiva, and either Cinnamon or Peppermint Water, with Tinct. of Orange or Ginger, covers the unpleasant taste. The Balsam and the Oil are sometimes put into capsules.

### Preparation.

**OLEUM COPAIBÆ.** Colourless or pale yellow.

The Oil distilled from Copaiva.

*Dose.*—5 to 20 minims in emulsion with mucilage or yolk of egg.

(Russ. Ol. Bals. Copaivæ; U.S.; not in others.)

### Not Official.

Mistura Copaibæ.—(1.) Copaiva 15 minims; Spirit of Nitrous Ether, 30 minims; Solution of Potash, 15 minims; Camphor Water to 1 oz.—*London Hospital.*

(2.) Copaiva, 30 minims; Mucilage, 1 drm.; Spirit of Nitrous Ether, 30 minims; Peppermint Water to 1 oz.—*Westminster Hospital.*

Extract of Copaiva.—Prepared from the Balsam by evaporation. If rubbed well with double its weight of compound Almond Powder into a paste, will form an emulsion with water.

## CORIANDRI FRUCTUS.

### CORIANDER FRUIT.

The ripe fruit of *Coriandrum sativum* dried; cultivated in Britain.

### *Medicinal Properties.*

Stimulant, aromatic, and carminative.

*Dose.*—20 to 60 grs.

(In all the Pharmacopœias.)

Contained in Confectio Sennæ, Mistura Gentianæ, Syr. Rhei, Tinctura Rhei, Tinct. Sennæ.

### Preparation.

**OLEUM CORIANDRI.** Colourless.

The Oil distilled in Britain from the fruit. Sp. g. about ·870.

1 lb. of fruit yields about 42 grs. of Oil.

Used to render medicines more palatable, and prevent griping.

Contained in Syrupus Sennæ.

*Dose.*—1 to 4 minims in pill or emulsion.

(Not in other Pharmacopœias.)

## CREASOTUM.

### CREASOTE.

A strongly refracting liquid, colourless, or very slightly yellow, with a peculiar odour.

olubility, sparingly in Water; freely in Alcohol and Ether; 1 in Glacial Acetic Acid, but separates on the addition of water.

reasote was discovered by Reichenbach, who found it in Wood . It preserves animal substances from decay, from which property name is derived.

; is to the presence of this substance that the process of smoking s owes its efficacy.

; coagulates Albumen. Boils about 400° F. Sp. g. 1·071.

est.—A slip of deal dipped into it, and afterwards into Hydrochloric l, and then allowed to dry in the air, acquires a greenish-blue ur. Carbolic Acid does the same thing.

ropped on white filtering-paper, and exposed to a heat of 212° F., aves no translucent stain. It is not solidified by the cold produced he mixture of Hydrochloric Acid and Sulphate of Soda. It turns plane of a ray of polarized light to the right, whereas Carbolic l does not affect polarization. It is insoluble in Glycerine, whereas bolic Acid is very soluble. If an equal volume of Glycerine and of asote be shaken together, they will afterwards separate and both erfectly bright; if, however, Carbolic Acid be present the Glyce- is turbid; and if in sufficient quantity, the so-called Creasote is olved.

### *Medicinal Properties.*

stringent, narcotic, styptic, antiseptic, and escharotic. Given inally for chronic gonorrhœa and gleet, for arresting nausea in hysteria pregnancy, and for obstinate sea-sickness. It has been given with antage in malignant cholera and cholera infantium, and bleeding n the intestines. It allays thirst and craving for food in diabetes. drachm in 15 or 20 oz. of water for a gargle in obstinate saliva- . 1 drop to 1 oz. of water is injected into the bladder to obviate putrid odour of the urine. Externally used, in the proportion of rop to 1 drm. for a lotion, to eruptions of a scaly character, to ns and chilblains, to erysipelas of the face, with swelling and a; toothache, when depending on caries, is relieved by its appli- on.

ose.—1 to 3 minims, diluted with weak mucilage (½ oz. to each minim); or in a with crumb of bread.

When prescribed in pills with Oxide of Silver, the mass will take fire unless the ide be first mixed with Liquorice or other powder.

(In all the Pharmacopœias.)

## Preparations.

**TURA CREASOTI.**

reasote, 16 minims; Glacial Acetic Acid, 16 minims; Spirit of iper, ½ drm.; Syrup, 1 oz.; Distilled Water, 15 ozs.: mix the asote with the Acetic Acid, gradually add the Water, and lastly the up and Spirit of Juniper. =(1 in 484).

A good mode of administering Creasote, its unpleasant taste being concealed by e Juniper.

It dissolves in the Water without the aid of the Acid.

Mucilage will render Creasote emulsive with water.

*Dose.*—1 to 2 oz.

(Not in other Pharmacopœias.)

**UNGUENTUM CREASOTI.** Cream colour.

Creasote, 1; Simple Ointment, 8: mix. =(1 in 9).

(U.S. and Belg. (Ung. Kreosoti) about 1 in 16; not in others.)

Employed in mild cases of ringworm.

**VAPOR CREASOTI.—INHALATION.**

Creasote, 12 minims; boiling Water, 8 oz.: mix the creasote and water in an apparatus so arranged that air may be made to pass through the solution for inhalation.

(Not in other Pharmacopœias.)

Not Official.

Aqua Creasoti. U.S. Creasote 1, Water 116; Austr. and Ger. 1 and 100; Belg. 1 in 125; all by weight.

Liquor Carbonis Detergens.—An alcoholic solution of Coal Tar as obtained from the gas-works. It is almost black, smells strongly of Naphthaline, and is of light specific gravity. Prescribed by Mr. Startin to be used externally in skin diseases in the following manner:—Liq. Carbonis Detergentis, ½ oz.; Ac. Nitric. Dil., 1 drm.; Mist. Camphoræ ad 8 ozs.: to be sponged over the part affected when irritable, and afterwards to be dried off with soft linen.

Mistura Creasoti c. Opio.—Creasote, 1 minim; Comp. Tincture of Camphor, 30 minims; Spirit of Chloroform, 15 minims; Glycerine, 1 drm.; Water to 1 oz.—*Chest Hospital.*

## CRETA.

### CHALK.

Native friable Carbonate of Lime. Used for producing Carbonic Acid Gas.

Chalk cliffs are remarkably absorbent of moisture, and cesspools even, made in the chalk, are always found dry.

In the form of whiting, chalk can be obtained in almost every house; when mixed with water to the consistence of cream, it is an excellent application for burns.

## CRETA PRÆPARATA.

### PREPARED CHALK.

Carbonate of Lime, $CaCO_3$, nearly pure, eq. 100.

Chalk freed from most of its impurities by elutriation, and afterwards dried in small cones.

Insoluble in Water. Almost entirely soluble in Diluted Hydrochloric Acid with effervescence. This solution, when supersaturated with Solution of Ammonia, gives a copious white precipitate on the addition of Oxalate of Ammonia.

*Test.*—The salt formed by dissolving the Chalk in Hydrochloric Acid, if rendered neutral by evaporation to dryness and redissolved in water, gives only a very scanty precipitate on the addition of Saccharated Solution of Lime—indicating absence of Phosphate.

### *Medicinal Properties.*

It is astringent and antacid. Combined with other astringents and aromatics, it is used in diarrhœa accompanied with acidity. One of the best antidotes for Oxalic Acid. Has been recommended in rachitis and in scrofulous affections. Used externally to burns and ulcers.

Prescribed in powder or suspended in mucilage.

*Dose.*—10 to 60 grs.

(Belg. Carbonas Calcis Depuratus; Fr. Poudre de Craie; Russ.; U.S.; not in others.)

Contained in Hydrargyrum cum Cretâ.

INCOMPATIBLES.—All Acids and Sulphates.

## Preparations.

**MISTURA CRETÆ.**

Prepared Chalk, 1; Gum Acacia, in powder, 1; Syrup, 2; Cinnamon Water, 30: mix by trituration. =(1 in 34).

*Dose.*—1 to 2 oz. with astringent tinctures and opium.

(Fr. gives Brit. formula; Belg. about 1 in 40; U.S. 1 with 1 of Glycerine in 18; not in others.)

Care should be taken to use the *Prepared* Chalk, as directed; the Precipitated Chalk has a crystalline character, and is said to occasion irritation of the bowels.

**PULVIS CRETÆ AROMATICUS.** Dark fawn colour.

Prepared Chalk, 11; Cinnamon, 4; Nutmeg, 3; Saffron, 3; Cloves, 1½; Cardamom Seeds, 1; Refined Sugar, 25; all in powder: mix. =(1 Chalk in 4 nearly).

*Dose.*—30 to 60 grs.

**PULVIS CRETÆ AROMATICUS CUM OPIO.** Dark fawn colour.

Aromatic Powder of Chalk, 39; Opium, in powder, 1: mix thoroughly and pass through a sieve. =(1 Opium in 40).

*Dose.*—10 to 40 grs.

### Not Official.

CHOLERA MIXTURE.—Aromatic Powder, 3 drms.; Sp. Sal. Volatile, 3 drms.; Tincture of Catechu, 10 drms.; Compound Tincture of Cardamoms, 6 drms.; Tincture of Opium, 1 drm.; Chalk Mixture to make 20 oz.

This mixure was proposed by the Board of Health during the prevalence of cholera, and is useful in all cases of diarrhœa.

*Dose.*—1 oz. for an adult, ½ oz. for a child twelve years old, ¼ oz. for seven years old, after each liquid motion.

MISTURÆ CRETÆ C. OPIO.—(1.) Aromatic Confection, 12 grs.; Chalk, 24 grs.; Comp. Powder of Tragacanth, 6 grs.; Tincture of Kino, 12 minims; Spirit of Sal Volatile, 12 minims; Tincture of Opium, 6 minims; Peppermint Water to 1 oz.

*Dose.*—2 to 4 drms. in water for diarrhœa.—*Skin Hospital.*

(2.) Aromatic Powder of Chalk, 20 grs.; Tincture of Opium, 5 minims; Spirit of

Chloroform, 20 minims; Tincture of Capsicum, 2 minims; Pimento Water to 1 oz.—*Chest Hospital.*

**Unguentum Cretæ.**—Prepared Chalk, 1; Spermaceti Ointment, 4: mix.

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## CROCUS.

### SAFFRON.

The stigma and part of the style of *Crocus sativus* dried; imported from Spain, France, and Italy.

*Test.*—When rubbed on the moistened finger it tinges it an intense orange-yellow. Pressed between the folds of filtering-paper it leaves no oily stain. Concentrated Sulphuric Acid instantly changes its colour to indigo-blue, which soon disappears.

### *Medicinal Properties.*

A slightly exhilarating stimulant. Useful for giving colour and flavour to official preparations.

Contained in Decoct. Aloes Comp.; Pil. Aloes et Myrrhæ; Tinct. Opii Ammoniata; Tinct. Rhei; Tinct. Cinch. Comp.; Pulvis Cretæ Aromaticus.

(In all the Pharmacopœias; Fr. Safran.)

### Preparation.

**TINCTURA CROCI.** Light brown.

Saffron, 1; Proof Spirit, 20: macerate forty-eight hours with 15 of the spirit, agitating occasionally, pack in a percolator, let it drain, and then pour on the remaining spirit; when it ceases to drop, press and add proof spirit to make up to 20. =(1 in 20).

*Dose.*—½ to 2 drms.

(Dan. Fr. Ger. and Russ. 1 and 10; Belg. 1 in 5, all by weight; not in others.)

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## CROTONIS OLEUM.

### CROTON OIL.

The oil expressed from the seeds of *Croton Tiglium*, a native of Hindostan, Ceylon, and the Moluccas. 100 parts of seed yield about 50 of oil.

A brownish yellow liquid. Sp. gr. ·940 ·950.

Soluble in Ether, Oil of Turpentine, and Olive Oil.

The solubility of Croton Oil in absolute Alcohol appears to depend in a great measure on the age of the oil, and the greater or less freshness of the seeds from which it was expressed; as oxidised or resinified oil dissolves the more readily.—*Pharm. Journ.*, Jan. 1865, p. 382, and March, 1878, p. 705.

### *Medicinal Properties.*

A powerful hydragogue purgative, acting with great rapidity. In cases of obstinate constipation, and in apoplexy. Especially useful in dropsy following scarlet fever, in doses of ⅛ to ¼ of a drop, rubbed up with mucilage, syrup, and water. Applied externally in rheumatism, gout, neuralgia, glandular and other indolent swellings, and in laryngeal and pulmonary diseases in the form of liniment.

*Is an hepatic stimulant of very feeble power.—Dr. Rutherford.*

*Dose.*—½ to 1 minim.

(In all the Pharmacopœias; U.S. Ol. Tiglii.)

In pill with Crumb of Bread, or in combination with Comp. Ext. of Colocynth.

**Antidotes.**—In case of an overdose which acts as a violent purgative, an emetic of 20 grains of Sulphate of Zinc should be at once administered, followed by mucilaginous fluids and Opium to check the diarrhœa.

### Preparation.

**LINIMENTUM CROTONIS.** Greenish-yellow.

Croton Oil, 1; Oil of Cajuput, 3½; Rectified Spirit, 3½: mix. =(1 in 8).

(Not in other Pharmacopœias.)

5 minims to 1 oz. of Olive Oil are used to promote the growth of hair.

#### Not Official.

**Croton Oil Pencils.**—Croton Oil 2, Cacao Butter 1, White Wax 1: melt together the last two in a water-bath, add the oil, and when nearly cold pour into moulds.

## CUBEBA.

### CUBEBS.

The unripe fruit of *Cubeba officinalis,* dried, imported from Java.

#### *Medicinal Properties.*

Gently stimulant, with special direction to the urinary organs. Given in gonorrhœa, most safely when the inflammation is confined to the mucous membrane of the urethra. The Essential Oil in syrup is expectorant, useful in croup, the soft membrane disappearing in a short time; useful in sore throat.

The tincture is given with an equal quantity of Tincture of Orange to cover the taste.

*Dose.*—For gonorrhœa 1 to 2 drms. of the powder, wrapped in moistened wafer-paper, three or four times a day. In other cases the dose may be reduced to 10 grs.

Lozenges are made, and called bronchial troches.

(In all the Pharmacopœias.)

### Preparations.

**OLEUM CUBEBÆ.** Faintly green.

The Oil, distilled in Britain.

*Dose.*—5 to 20 minims, suspended in Water by means of Mucilage and Sugar.

(Belg. Russ. (sp. g. ·900—·930) and U.S.; not in others.)

**TINCTURA CUBEBÆ.** Straw colour.

Cubebs, in powder, 1; Rectified Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, and let it drain; pour on the remaining spirit, and when it ceases to drop, press and add rectified spirit to make up to 8. =(1 in 8).

*Dose.*—1 to 2 drms.

(U.S. nearly same as Brit.; not in others.)

## CUPRUM.

### COPPER.

**Cu**, eq. 63·5.

Sp. g. 8·9: fuses about 2000° F. Copper, or Venus of the alchemists, has been employed from the earliest ages, and previous to the discovery of malleable iron was the principal ingredient in the formation of domestic utensils and instruments of war. It takes its name from the island of Cyprus, where it was wrought by the Greeks. It is found both native and in combination with Oxygen, Chlorine, and Sulphur; of these, the Sulphate only is official. The purest Copper is that which is deposited by electricity.

Copper wire No. 25 is used for preparing Spiritus Ætheris Nitrosi.

## CUPRI SULPHAS.

### SULPHATE OF COPPER.

**$CuSO_4.5H_2O$**, eq. 249·5.

In oblique prismatic crystals of a clear blue colour.

Solubility: 1 in 3 of Water; 1 in 4 of Glycerine.

*Test.*—An aqueous solution of the salt to which twice its volume of Solution of Chlorine has been added, when treated with an excess of Solution of Ammonia, gives a sapphire-blue solution, leaving nothing undissolved—indicating absence of Iron and other impurities.

### *Medicinal Properties.*

Astringent, tonic, and emetic. Given in epilepsy and chorea. Recommended also in croup and in chronic diarrhœa. The most reliable emetic in cases of narcotic poisoning. Externally, as a styptic for bleeding surfaces and a stimulant to ulcers, as an escharotic for warts, &c. For lotions, in proportions from 2 to 4 grs. to 1 oz.; also 8 grs. to 1 oz. for prurigo genitalium. As an injection, to diminish excessive secretion from mucous membranes, especially in cases of prolapsus ani, where it affords permanent relief, the solution should be made 5 grs. to the oz. For urethral injections, 1 to 4 grs. in an ounce of water. It is also used in various affections of the eyes when astringent applications are required.

*Dose.*—¼ gr. gradually increased to 2 grs. three times a day, in pill, as a tonic for epilepsy; 10 grs. in 2 oz. of water as a prompt emetic in cases of narcotic poisoning.

(In all the Pharmacopœias.)

**Incompatibles.**—Alkalies and their Carbonates, Lime Water, Mineral Salts (except the Sulphates), Iodides, and most astringent Vegetables.

**Antidotes.**—In case of poisoning by Sulphate of Copper, Albumen or White of Egg is the best antidote, followed by Laudanum internally, and Linseed Meal poultices applied to the abdomen.

Not Official.

**Cuprum Aluminatum**, vel **Lapis Divinus**, Ger.—Sulphate of Copper, Nitrate of Potash, and Alum, of each equal parts, in powder, fused in a glazed earthen crucible, powdered Camphor, to the extent of $\frac{1}{50}$th part of the whole, being added near the end of the process. When cold, break in pieces and keep in a closely stoppered bottle. An eye-wash may be made of 2 grains to an ounce of distilled water.

(Fr. Pierre Divine.)

**Haustus (Emeticus) Cupri Sulphatis.**—Sulphate of Copper, 10 grs.; Water, 1½ oz.

**Collyrium Cupri Sulphatis.**—Sulphate of Copper, 2 grs.; Water to 1 oz.—*King's College Hospital. British Skin.*

**Pilula Cupri Comp.**—Sulphate of Copper, ¼ gr.; Opium, ¼ gr.; Confection of Roses, *q.s.*—*Fever Hospital.*

Not Official.

## CURARA—WOORARA.

A powerful poison used by the Indians in the Northern part of South America for arming the points of their arrows. A brownish black shining brittle resinous mass almost wholly soluble in water, sparingly soluble in absolute alcohol. Different samples vary very much in strength, so that the dose of every parcel has to be arrived at by experiment. It is only used hypodermically, and the solution can be made by treating 1 grain Curara with 12 minims Distilled Water; let it stand for 48 hours and filter.

*Dose.*—$\frac{1}{10}$th to ½ grain, but should be used with great care.

An Alkaloid Curarina has been obtained from Curara.

## CUSPARIÆ CORTEX.

### CUSPARIA BARK; ANGUSTURA BARK.

The bark of *Galipea Cusparia*, from tropical South America.

*Test.*—The inner surface touched with Nitric Acid does not become blood-red.

This test is to guard against the Strychnos Bark being mistaken for the Cusparia; the former contains Brucia, which becomes blood-red by contact with Nitric Acid.

### *Medicinal Properties.*

A stimulant tonic. Used in malignant bilious fever, intermittent fever, dysentery, and in convalescence from acute diseases. Probably more effective in warm than in temperate climates. Aromatics are generally combined with it, to prevent nausea.

*Dose.*—Of the powder, 10 to 40 grs.

(Belg. Fr. U.S. Angustura; not in others.)

### Preparation.

**INFUSUM CUSPARIÆ.**

Cusparia Bark, in coarse powder, 1; Distilled Water at 120° F., 20: infuse two hours and strain. =(1 in 20).

(U.S. Inf. Angusturæ, 1 in 30; not in others.)

*Dose.*—1 to 2 oz.

INCOMPATIBLES.—Mineral Acids, Perchloride of Iron, and other Metallic Salts.

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## CUSSO.

### KOUSSO.

The flowers and tops of *Brayera anthelmintica*, from Abyssinia.

### *Medicinal Properties.*

Anthelmintic. Especially for tænia.

*Dose.*—¼ to ½ oz.

(In all the Pharmacopœias.)

### Preparation.

**INFUSUM CUSSO.**

Kousso, in coarse powder, ¼ oz.; boiling Distilled Water, 4 oz.: infuse fifteen minutes, without straining, for one dose.

(Fr. Apozème de Cousso about 1 in 8; not in other Pharmacopœias.)

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Not Official.

## CYDONIUM.

### QUINCE SEED.

The seeds of *Cydonia vulgaris*.

Their coriaceous envelope abounds in mucilage.

*Medicinal Properties.*—Demulcent. The decoction used externally for cracks in the skin. A nice neutral adjunct to eye-lotions in cases of irritation and inflammation.

DECOCTUM.—Quince Seed, 1; Distilled Water, 80: boil over a slow fire for ten minutes, and strain.

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## DECOCTA.

### DECOCTIONS.

The following are the Decoctions of the British Pharmacopœia (to be boiled in covered vessels), the formulas of which will be found under the names of the substances from which they are prepared:—

| | Proportion of active ingredients to the whole. | Dose. |
|---|---|---|
| DECOCTUM ALOES COMPOSITUM . . | 1 in 120. | ½ to 1½ oz. |
| DECOCTUM CETRARIÆ. . . . . . . . | 1 in 20. | 1 to 2 „ |
| DECOCTUM CINCHONÆ FLAVÆ . . . | 1 in 16. | 1 to 2 „ |
| DECOCTUM GRANATI RADICIS . . . | 1 in 10. | 1 to 2 „ |

| | Proportion of active ingredients to the whole. | Dose. |
|---|---|---|
| DECOCTUM HÆMATOXYLI | 1 in 20. | 1 to 2 oz. |
| DECOCTUM HORDEI | 1 in 15. | |
| DECOCTUM PAPAVERIS | 1 in 10. | |
| DECOCTUM PAREIRÆ | 1 in 14. | 1 to 2 „ |
| DECOCTUM QUERCUS | 1 in 16. | |
| DECOCTUM SARSÆ | 1 in 8. | 2 to 10 „ |
| DECOCTUM SARSÆ COMPOSITUM | 1 in 8. | 2 to 10 „ |
| DECOCTUM SCOPARII | 1 in 20. | 2 to 4 „ |
| DECOCTUM TARAXACI | 1 in 20. | 2 to 4 „ |
| DECOCTUM ULMI | 1 in 8 | 2 to 4 „ |

Decoctions not official are enumerated in the Index.

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# DIGITALINUM.

## DIGITALIN.

The active principle obtained from Digitalis.

In porous mammillated masses or small scales, white, inodorous, and intensely bitter.

Solubility: readily in Spirit; dissolves in Acids, but does not form with them neutral compounds; almost insoluble in Water and in pure Ether.

*Test.*—Leaves no residue when burned with free access of air.

*Dose.*—$\frac{1}{60}$ to $\frac{1}{30}$ of a grain.

(Austr. Fr. Russ. and U.S.; not in others.)

This powerful poison might well have been omitted from the British Pharmacopœia, together with its dose, which in practical dispensing is as difficult to weigh as it is to test the purity of the drug itself. It will be very rarely, if ever, prescribed by careful practitioners.

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# DIGITALIS FOLIA.

## DIGITALIS LEAF.

The dried leaf of *Digitalis purpurea* (Foxglove), gathered from wild indigenous plants when about two-thirds of the flowers are expanded.

### *Medicinal Properties.*

Sedative and diuretic, useful in acute dropsy when disturbance arises from over-action of the heart. It is cumulative in action, and requires caution.

*Dose.*—½ to 2 grs. of the powdered leaf.

Incompatibles.—Sulphate and Tinct. Perchloride of Iron, preparations of Cinchona, Acetate of Lead.

Antidote.—In case of an overdose, a recumbent posture is of paramount importance; and after the stomach has been emptied, 20 grains Tannic or Gallic Acid in hot water given frequently, or hot strong tea or coffee; stimulants externally and internally should be employed.

## Preparations.

**INFUSUM DIGITALIS.**

Digitalis leaves, dried, 30 grs.; boiling Distilled Water, 10 oz.: infuse one hour and strain. =(1 in 160).

*Dose.*—¼ to ½ oz.

(Dan. 1 in 100; U.S. with Tincture of Cinnamon, 1 in 68; not in others.)

**TINCTURA DIGITALIS.** Dark greenish-brown.

Digitalis leaves, in coarse powder, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of spirit, agitating occasionally, pack in a percolator, and let it drain, then pour on the remaining spirit; when it ceases to drop, press and add proof spirit to make up to 8. =(1 in 8).

*Dose.*—10 to 30 minims: but in cases of delirium tremens, 1 drm. every three hours. Two or even three drms. have been given in cases carefully watched.—*Practitioner*, Nov. 1881, p. 373, and Wood and Bache, p. 379.

(U.S. 1 in 7; Austr. Belg. Fr. 1 in 5; Ger. with fresh plant; Dan. and Russ. 1 and 10; Belg. and Fr. 1 Fresh herb, 1 Spirit; Ger. 5 Fresh herb, 6 Spirit; Belg. with Ether, 1 dried herb in 5; Fr. with Ether alcoolisé, 1 dried herb and 5; Dan. Ger. and Russ. with Spirit of Ether 1 dried leaves and 10; all by weight.)

Not Official.

Pilula Digitalis Comp.—Digitalis Powder, ½ gr.; Squill, 1 gr.; Blue Pill, 3 grs.: in one Pill. *St. George's.*

Succus Digitalis.—The Expressed Juice, 3; Rectified Spirit, 1.

This preparation may be given for a longer period than the tincture without causing nausea.

*Dose.*—5 to 10 minims.

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Not Official.

## DUBOISIA MYOPOROIDES.

A plant indigenous in N.S. Wales and Queensland; it has been classed in the order Solanaceæ.

Dr. Ringer's experiments show that the physiological action of the extract is apparently identical with Atropia. Mr. Tweedy has used it as an application to the eye in all cases in which Atropine was indicated.—*Lancet*, March 2, 1878.

The Alkaloid is so powerful that a solution (1 in 120) specially applied to the eyes often excites great giddiness, weakness, and a "drunken feel."—Ringer.

A case of poisoning by application to the eye of a solution of Sulphate of Duboisine is quoted in *Med. Times and Gaz.*, Feb. 26th, 1881, p. 247.

The Sulphate of Duboisine occurs in crystals, which are hygroscopic.

Antidotes.—The same as Atropia.

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Not Official.

## DUGONG OIL.

Proposed as a substitute for Cod-Liver Oil by Mr. Hobbs, but it is far more expensive, and its use is consequently limited; it remains semi-solid at ordinary temperatures, has scarcely any odour when perfectly fresh, and not much taste.

# DULCAMARA.

## DULCAMARA.

The dried young branches of *Solanum Dulcamara* (Bittersweet), from indigenous plants which have shed their leaves.

### *Medicinal Properties.*

Narcotic. Increases the secretions, particularly of the kidneys and skin. It has a peculiar action on the skin, and has been observed to impart a dark purple colour to the face and hands. Used in cutaneous eruptions, chiefly of a scaly character, as lepra, psoriasis, and pityriasis, a decoction being applied externally, at the same time it is used internally. Also in chronic rheumatism and catarrh.

(Austr. Belg. Fr. (Douce-amère) and U.S.; not in others.)

### Preparation.

**INFUSUM DULCAMARÆ.**

Dulcamara, bruised, 1; boiling Distilled Water, 10: infuse one hour, and strain. =(1 in 10).

*Dose.*—1 to 2 oz.

(Not in others. Decoctum.—Belg. 1 in 20; U.S. about 1 in 15.)

# ECBALII FRUCTUS.

## SQUIRTING CUCUMBER FRUIT.

The fruit very nearly ripe of the Squirting Cucumber, *Ecbalium officinarum.*

(Fr. Ecbalium Agreste, Concombre Sauvage.)

PREPARATION.—Elaterium.

# ELATERIUM.

## ELATERIUM.

A sediment from the expressed juice of the fruit of *Ecbalium officinarum.*

The fruit is cut lengthwise, the juice lightly pressed out, strained through a hair sieve, then allowed to deposit; the clear liquor being poured off, the sediment thrown on a linen strainer to drain, and lastly dried on a porous brick with a gentle heat.

*Test.*—Does not effervesce with acids; yields half its weight to boiling rectified Spirit. This solution concentrated and added to warm Solution of Potash yields, on cooling, not less than 20 per cent. of Elaterine in colourless crystals. It is not injured by light.

### *Medicinal Properties.*

A powerful hydragogue cathartic. Especially used in dropsical affections connected with cardiac or renal disease. Its administration in a debilitated state of the system requires caution.

*Dose.*—To prevent it causing nausea, it may be given with Henbane, and is best given in doses of $\frac{1}{16}$ to $\frac{1}{2}$ gr. till it operates. Mr. Vance gave it with Gamboge in dropsy.

(Not in Austr. Dan. Fr. Ger. and Russ.)

**Antidotes.**—In case of poisoning with Elaterium, emollient and demulcent drinks and enemata, to be followed by small but repeated doses of Opium and the use of the warm bath.

**PULVIS ELATERII COMPOSITUS.**

Elaterium, 1; Sugar of Milk, 9: rub them together in a mortar until they are reduced to fine powder and intimately mixed.

*Dose.*—$\frac{1}{2}$ gr. to 5 grains.

### Not Official.

**Pilula Elaterii.**—Elaterium, $\frac{1}{12}$ gr.; Extract of Henbane, 4 grs.: for 1 pill. (Hydragogue Pill.)—*St. Mary's.*

**Pilula Elaterii Comp.**—Elaterium, $\frac{1}{8}$ gr.; Socotrine Aloes, 1 gr.; Extract of Henbane, 3 grs.: for 1 pill.—*Women.*

# ELEMI.

ELEMI.

A concrete resinous exudation, chiefly imported from Manilla.

Should have a fragrant, fennel-like odour, and is usually soft and unctuous to the touch, almost entirely soluble in Rectified Spirit.

### *Medicinal Properties.*

Analogous to those of Turpentine. For external use only.

(In all the Pharmacopœias, except Dan. and U.S.)

### Preparation.

**UNGUENTUM ELEMI.** Cream colour.

Elemi, 1; Simple Ointment, 4: melt, strain, and stir till cold. =(1 in 5).

(Belg. Ger. and Russ. 1 of Elemi and 1 of Turpentine in 4 of Ointment; not in others.)

It has a pleasant odour, and is used to keep open issues and setons.

# EMPLASTRA.

PLASTERS.

The Emplastra of the British Pharmacopœia are as follows, the formulas for which will be found under the names of the drugs from which they are prepared:—

| | Proportion of active ingredients in the mass. |
|---|---|
| EMPLASTRUM AMMONIACI CUM HYDRARGYRO | (Mercury) 1 in 5. |
| EMPLASTRUM BELLADONNÆ | (Extract dissolved by Alcohol) 1 in 2. |
| EMPLASTRUM CALEFACIENS | (Cantharides) 1 in 25. |
| EMPLASTRUM CANTHARIDIS | (Cantharides) 1 in 3. |
| EMPLASTRUM CERATI SAPONIS | (Soap) 1 in 5½. |
| EMPLASTRUM FERRI | (Peroxide of Iron) 1 in 11. |
| EMPLASTRUM GALBANI | (Galbanum) 1 in 11. |
| EMPLASTRUM HYDRARGYRI | (Mercury) 1 in 3⅔. |
| EMPLASTRUM OPII | (Opium) 1 in 10. |
| EMPLASTRUM PICIS | (Pitch) 1 in 2. |
| EMPLASTRUM PLUMBI. | |
| EMPLASTRUM PLUMBI IODIDI | (Iodide of Lead) 1 in 8. |
| EMPLASTRUM RESINÆ | (Resin) about 1 in 10. |
| EMPLASTRUM SAPONIS | (Soap) 1 in 7. |

**Plasters which are not official are enumerated in the Index.**

## ENEMATA.

ENEMAS.

The following are the Enemas of the British Pharmacopœia, the formulas for which will be found under the names of the drugs from which they are prepared :—

| | In each Enema. |
|---|---|
| ENEMA ALOES | 40 grs. Aloes. |
| ENEMA ASSAFŒTIDÆ | 30 grs. Assafœtida. |
| ENEMA MAGNESIÆ SULPHATIS | (Catharticum) 1 oz. Sulphate. |
| ENEMA OPII | ½ drm. Tincture. |
| ENEMA TABACI | 20 grs. Leaf. |
| ENEMA TEREBINTHINÆ | 1 oz. Oil. |

**John Arden, who flourished in the fourteenth century, treated largely with Clysters, and considered salt a necessary and an important ingredient.**

## ERGOTA.

ERGOT.

The sclerotium (compact mycelium, or spawn) of *Claviceps purpurea*, produced within the paleæ of the common rye, *Secale cereale*.*

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* Ergot is common on grasses, and if it occurs in the pastures where cattle feed, it is said to occasion dry gangrene, causing the cattle to lose their hoofs and horns.

During an epidemic of *Secale Cornutum* it was noticed that one of the symptoms of ergot poisoning was suppression of milk in lactating women. The same result followed in cows that had been fed on meal containing Ergot.—*Med. Times and Gazette* May 29th, 1875.

Yields its virtues to Water and Alcohol. In percolating the powder with Ether, about one-third of its original weight of Oil is extracted.

The aqueous infusion has an acid reaction; it is precipitated by Acetate and Subacetate of Lead, Nitrate of Silver, and Tincture of Galls. With Iodine, it does not show evidence of Starch.

Ergot should be thoroughly dried and kept in closed vessels, as it has a tendency to spoil, partly by oxidation of its oil and partly by the attacks of a mite.

### *Medicinal Properties.*

Has a special tendency to action upon the uterus in parturition when that organ has not sufficient muscular power, the os, however, being sufficiently dilated when parturition has commenced. Employed in uterine hemorrhage and floodings. Given in albuminuria. It is of service also in pulmonary hemorrhage. In amenorrhœa, if Iron be given for three weeks and the fourth week the Liquid Extract of Ergot be administered in 15-minim doses three times a day, it rarely fails to bring on catamenia in young persons. 15 minims given with 15 minims of Tincture of Henbane speedily relieve painful menstruation. 15 minims every quarter of an hour until hemorrhage ceased have been given with success in cases of epistaxis when *Liq. ferri perchlor.* and plugging had failed.—*Lancet,* Jan. 1, 1876. It is given in certain conditions of mania with advantage.

*Dose.*—20 to 30 grs., infused in boiling water, to cause uterine contraction; 5 to 10 grs. three times a day in spinal cases.

(In all the Pharmacopœias; Austr. Belg. Dan. Ger. and Russ. Secale Cornutum; Fr. Ergot de Seigle; U.S. Ergota.)

INCOMPATIBLES.—Astringents, Metallic Salts.

## Preparations.

**EXTRACTUM ERGOTÆ LIQUIDUM.** Intense brown.

Ergot, in coarse powder, 16; Ether, 20, or a sufficiency; Distilled Water, 70; Rectified Spirit, 8. Shake the Ether in a bottle with half its bulk of the Water, and after separation decant the Ether. Place the Ergot in a percolator, and free it from oil by passing the washed Ether slowly through it. Remove the marc, and digest in the remainder of the water at 160° F. for twelve hours. Press out the liquor and evaporate it to 9, and, when cold, add the 8 of spirit. Allow it to stand for an hour to coagulate; filter, and make up the quantity to 16. =(1 in 1).

If the prevailing opinion be correct, that water will extract the active principle of Ergot, notwithstanding the presence of the fixed oil, Ether is no longer necessary.

16 oz. of the Liquid Extract evaporated leave 2¼ ounces of solid Extract.

*Dose.*—10 to 60 minims.

(U.S. with Glycerine and Acetic Acid; not in others. Austr. Belg. Dan. Ger. and Rus. have a solid extract.)

**INFUSUM ERGOTÆ.**

Ergot, in coarse powder, 1; boiling Distilled Water, 40: infuse half an hour and strain. =(1 in 40).

Should be made fresh on each occasion.

*Dose.*—1 to 2 oz.; used also as an injection for gleet.

(Not in other Pharmacopœias.)

**TINCTURA ERGOTÆ.** Intense reddish-brown.

Ergot, bruised, 1; Proof Spirit, 4: macerate forty-eight hours with 3 of the spirit, agitating occasionally, pack in a percolator, let it drain, then pour on the remaining spirit; when it ceases to drop, press, filter, and make up with proof spirit to 4. =(1 in 4).

*Dose.*—15 to 60 minims.

(Ger. and Russ. 1 and 10; not in others.)

Not Official.

Extractum Secalis Cornuti. Ergotine (Ph. Germ.).—Ergot, in coarse powder, 1; Distilled Water, 2. Macerate for six hours, strain and press; pour upon the residue Distilled Water, 2, and do as before. Evaporate the mixed strained liquors to the consistence of a thin syrup, then mix in Diluted Spirit (sp. g, ·893), 1 *by weight*, set aside for one day, shaking frequently, filter, and evaporate to a solid extract.

Austr. Belg. Dan. and Russ. similar processes.

A solution is made, 12 grs. to 1 drm. water, and 5 mins. are subcutaneously injected for menstruation, or for hemorrhage 10 mins., and repeated if required in 4 hours.

Ergotine. By Bonjean's process it is a purified Aqueous Extract, and perfectly soluble in water.

By Wiggin's process, a resinoid substance, not crystallized; it is insoluble in water, alcohol, and acids; soluble in Caustic Potash.

Ergotine is now purified in Germany by dialysis.

Mistura Ergotæ Comp.—Liquid Extract of Ergot, 40 minims; Gallic Acid, 10 grs.; Cassia Water to 1 oz.—*London Hospital.*

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Not Official.

## ERIGERONTIS CANADENSIS OLEUM.

### OIL OF CANADA FLEABANE.

Has been employed for arresting hemorrhage in the dose of 5 minims every two hours.

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Not Official.

## EUCALYPTUS GLOBULUS.

### BLUE GUM TREE.

The leaves of this tree yield an oil which possesses antiseptic properties. Cloetz obtained from the leaves of the fresh plant 2½ to 5 per cent. of oil, which began to boil at 170° C. (338° F.), and as the distillation proceeded the boiling point rose until above 200° C. (392° F.). The more volatile liquid after purification with Caustic Potash and fused Chloride of Calcium boiled at 175° C. (347° F.); this latter he called Eucalyptol.

# EXTRACTA.

## EXTRACTS.

The following is a complete list of the Extracts of the British Pharmacopœia, the mode of preparation for which will be found under the names of the drugs from which they are prepared:—

| DOSE. | EXTRACTUM. | MENSTRUUM. |
|---|---|---|
| 1 to 2 grs. | ACONITI (juice of fresh herb). | |
| 1 to 3 grs. | ALOES BARBADENSIS. | Boiling water. |
| 1½ to 3 grs. | ALOES SOCOTRINÆ. | Boiling water. |
| 2 to 10 grs. | ANTHEMIDIS (dried flowers). | Boiling water. |
| 1 to 2 drms. | BELÆ LIQUIDUM. | Cold water. |
| ¼ to 1 gr. | BELLADONNÆ (juice of fresh herb). | |
| 2 to 10 grs. | CALUMBÆ (dried root). | Cold water. |
| ¼ to 1 gr. | CANNABIS INDICÆ (dried herb). | Cold rectified spirit. |
| 10 to 30 mins. | CINCHONÆ FLAVÆ LIQUIDUM. | Cold water. |
| ½ to 2 grs. | COLCHICI (juice of fresh corms). | |
| ½ to 2 grs. | COLCHICI ACETICUM (fresh corms). | With Acetic Acid. |
| 3 to 10 grs. | COLOCYNTHIDIS COMPOSITUM. | |
| 2 to 6 grs. | CONII (juice of fresh herb). | |
| 10 to 60 mins. | ERGOTÆ LIQUIDUM (dried Ergot). | Ether and water at 160° F. |
| 15 to 30 mins. | FILICIS LIQUIDUM (dried rhizome). | Ether. |
| 5 to 10 grs. | GENTIANÆ (dried root). | Boiling water. |
| | GLYCYRRHIZÆ (dried root). | Cold water. |
| 1 drm. | GLYCYRRHIZÆ LIQUIDUM. | Cold water. |
| 10 to 30 grs. | HÆMATOXYLI (chips). | Boiling water. |
| 5 to 10 grs. | HYOSCYAMI (juice of fresh herb). | |
| 5 to 15 grs. | JALAPÆ (dried root). | Spirit and cold water. |
| 5 to 20 grs. | KRAMERIÆ (dried root). | Cold water. |
| 5 to 15 grs. | LACTUCÆ (juice of fresh flowering herb). | |
| 5 to 15 grs. | LUPULI (dried catkins). | Spirit and hot water. |
| | MEZEREI ÆTHEREUM (dried bark). | Ether. |
| ½ to 2 grs. | NUCIS VOMICÆ. | Boiling Rectified Spirit. |
| ½ to 2 grs. | OPII. | Cold water. |
| 10 to 40 mins. | OPII LIQUIDUM.<br>(Stronger than Tinct. Opii.) | Cold water and spirit. |
| 2 to 5 grs. | PAPAVERIS (dried capsules). | Boiling water and spirit. |
| 10 to 20 grs. | PAREIRÆ (dried root). | Boiling water. |
| ½ to 2 drms. | PAREIRÆ LIQUIDUM (dried root). | Boiling water and spirit. |
| 1/16 to ¼ gr. | PHYSOSTIGMATIS (Calabar bean). | Cold rectified spirit. |
| 3 to 5 gr. | QUASSIÆ (chips). | Cold water. |
| 5 to 10 grs. | RHEI (dried root). | Cold weak spirit. |
| 2 to 4 drms. | SARSÆ LIQUIDUM (root cut transversely). | Cold water and spirit. |

| DOSE. | EXTRACTUM. | MENSTRUUM. |
|---|---|---|
| ¼ to ½ gr. | STRAMONII (dried seeds). | Ether and cold weak spirit. |
| 5 to 30 grs. | TARAXACI (juice of fresh root). | |

Extracts which are not official are enumerated in the Index.

Extracts are to be found in Pharmacopœias of very early date, and they are highly satisfactory preparations, as they represent very completely the properties of the plant from which they are made. They are moreover, as a general rule, well adapted for pills—a convenient form and least objectionable to the patient.

Although the extracts from the fresh medicinal plants have been so long in use, many erroneous notions have prevailed as to the best mode of making them. All previous Pharmacopœias order the *leaves* only to be employed, under the idea that the properties of the plant were most highly developed in those organs. These leaves, again, were directed to be gathered for medicinal use before the flowering of the plant. The Author, who has been occupied in this branch of pharmacy for nearly fifty years, is entirely opposed to this plan, both as to the parts employed and the time of gathering. In a paper on "Preserved Juices," read at the Pharmaceutical Society in 1841,* he stated his opinion that the plant was in the highest state of perfection when fully one-third of the flowers were blown. The main object of the growth and inflorescence of a plant is the production of seed, and the whole vital power is concentrated about the period of inflorescence for this object; at this time, therefore, is the greatest perfection to be expected. That the production of the seed requires the whole vital energy of which the plant is capable, may be seen in the fact that many plants (annuals) are unable to survive it.

In a more recent paper† he has shown that the active power resides by no means exclusively in the leaves; on the contrary, an extract prepared from the tender stalks is the more powerful. The plant selected for experiment was Belladonna, because in this case extremely accurate results could be obtained by determining the relative action of the two extracts on the eye. In consequence of these experiments, the British Pharmacopœia has ordered the tender stalks as well as the leaves for making extracts from fresh plants.

The perfection of extracts made from fresh vegetables depends much on the attention given to them during their preparation, and to the temperature at which they are made. The lower the temperature during evaporation, the better the extract, if the time be not protracted so long as to cause some chemical change. It should be borne in mind that evaporation goes on only half as rapidly at 150° as it does at 180°, and only half at 180° as it does at 212° F. Constant agitation materially influences the rate of evaporation. When the atmosphere is warm and very dry, extracts may be made without artificial heat.

Extracts should be kept in a cool, dry place, first because a summer temperature frequently causes them to ferment, even though they may have been made with great care, and secondly because in a damp atmosphere they are apt to become mouldy.

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* *Pharmaceutical Journal*, vol. i. 1841.

† Ibid. Dec. 1861.

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## FARINA TRITICI.

### WHEATEN FLOUR.

The grain of Wheat, *Triticum vulgare*, ground and sifted.

Used only for Cataplasma Fermenti.

Made into a paste with honey, is an excellent application for boils.

Bran bread and Bran biscuits, also those of Gluten, are made for the food of Diabetic patients.

**Cataplasma Panis.**—Grated Bread and sufficient boiling water.

Hot Bran Poultice in a flannel bag is an excellent application to injured veins.

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## FEL BOVINUM PURIFICATUM.

### PURIFIED OX BILE.

Fresh Gall, 1; Rectified Spirit, 2: agitate, and set aside for twelve hours, then decant, and evaporate over a water bath to a pill consistence.

Soluble in Water and in Spirit. Insoluble in Ether.

*Test.*—Its watery solution gives no precipitate on the addition of Rectified Spirit.

*Medicinal Properties.*

Tonic and laxative. Used where there is a deficiency of bile.

It is not desirable that it should come in contact with the stomach, hence it is put into capsules or in pills coated with Tolu dissolved in Ether; the latter usually preferred.

*Dose.*—3 to 6 grs. dissolved in milk or in pill with Aloes.

(Austr. (Fel Tauri depuratum) Gall 3, Spirit 5; Dan. (Bilis bovina depurata) Ger. and Russ. (Fel Tauri Depuratum Siccum) equal weights of Gall and Rectified Spirit; not in others. Fr. (Extrait de Fiel de Bœuf), Belg. Ger. and Russ. (Fel Tauri inspissatum), Gall evaporated, without purification by spirit.)

Formerly the bile was evaporated without purification, and then the dose was much larger.

8 oz. Ox Gall, diluted with 8 oz. Water and a few crystals of washing Soda, used as an enema, is sometimes useful in severe cases of intestinal obstruction.—*Lancet*, Aug. 24 and 31, 1878.

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## FERMENTUM.

*See* CEREVISIÆ FERMENTUM.

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# FERRUM.

## IRON.

**Fe, eq. 56.**

Sp. g. 7·8; fuses about 2786° F. The use of Iron in medicine is of great antiquity; it is said to have been the first mineral used internally, more than 3000 years ago.

Annealed Iron Wire is the purest that can be obtained, and is ordered in the Pharmacopœia for making the various preparations. Iron Filings should by no means be trusted, as they are generally full of impurities.

### *Medicinal Properties.*

Metallic Iron would exert no action in the living system, were it not for the acid which it generally meets with in the stomach. It is given in the state of fine division, as Ferrum Redactum. The Peroxide was formerly used in the shape of Ferrum Præcipitatum, but latterly the Saccharo-Carbonate of Iron and the Ammonio-Citrate of Iron have taken its place. The Phosphates are much used, and the Tincture of the Perchloride, formerly called Sesquichloride, is still a favourite and reliable preparation; and for children the Vinum Ferri is preferred.

Of the preparations of Iron, some are astringent, and the astringent forms are pre-eminently tonic, and peculiarly well fitted to improve the quality of the blood when impoverished from any cause. Hence they are useful in diseases characterized by debility, especially in anæmia, associated with or consequent upon inordinate discharges. The diseases in which they are usually employed are chronic anæmia, dyspepsia, when dependent on deficient energy of the digestive function, and neuralgia. They are contra-indicated in acute inflammatory diseases, producing, when injudiciously employed, headache, and other symptoms, of an excited circulation.

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# FERRI ACETATIS TINCTURA.

Deep brown colour.

Solution of Persulphate of Iron, 5; Acetate of Potash, 4; Rectified Spirit, *q. s.*: dissolve the Acetate of Potash in 20 of Spirit, and add to the solution of Iron 16 of Spirit; mix the two liquids, and shake well occasionally for an hour, then filter, and add to the filtered liquid sufficient Rectified Spirit to make up 40.

*Dose.*—5 to 30 minims.

(Not in the other Pharmacopœias.)

### Not Official.

LIQUOR FERRI ACETICI (Ger.).—Saturate Acetic Acid, sp. g. 1·040, with freshly precipitated Peroxide of Iron previously well washed and pressed; it should have sp. g. 1·134—1·138.

TINCT. FERRI ACET. ÆTHEREA (Belg. Ger. and Russ.).—Solution of Acetate of

Iron, 9; Rectified Spirit, 2; Acetic Ether, 1 (all *by weight*): mix. Dose, 10 to 20 minims.

## FERRI ARSENIAS.

### ARSENIATE OF IRON.

### $Fe_3As_2O_8$, eq. 446.

A tasteless amorphous powder, of a green colour, partially oxidized. Dissolves readily in Hydrochloric Acid; insoluble in water.

*Test.*—A small quantity, boiled with an excess of Caustic Soda and filtered, gives when exactly neutralized by Nitric Acid, a brick red precipitate with solution of Nitrate of Silver. The solution in Hydrochloric Acid when diluted gives no precipitate with Chloride of Barium—indicating absence of Sulphuric Acid. 20 grains dissolved in an excess of Hydrochloric Acid diluted with water continue to give a blue precipitate with the Ferridcyanide of Potassium, until at least 170 grain-measures of the volumetric solution of Bichromate of Potash have been added; that is to say, it must contain sufficient Protosalt of Iron to require this quantity of Bichromate of Potash to convert it all into persalt.

### *Medicinal Properties.*

Administered internally in obstinate herpetic and scaly affections of the skin. Also used in lupus, elephantiasis, psoriasis, chronic eczema, and lichens. Externally in cancerous affections, mixed with four times its weight of Phosphate of Iron, as a caustic application to cancerous ulcers. From its liability to be absorbed, its use requires great caution. An ointment may be made with twelve times its weight of simple cerate.

*Dose.*—$\frac{1}{16}$ gr., gradually increased to $\frac{1}{2}$ gr. in pill, three times daily.

(Not in the other Pharmacopœias.)

ANTIDOTES.—Vide Acidum Arseniosum.

Not Official.

## FERRI BROMIDI SOLUTIO.

Each fluid drachm containing 4½ grs. of Bromide.

*Dose.*—20 to 60 minims in water.

SYRUPUS.—Of the same strength and dose as the solution.

## FERRI CARBONAS SACCHARATA.

### SACCHARATED CARBONATE OF IRON.

Carbonate of Iron, $FeCO_3$, eq. 116, mixed with Peroxide of Iron and Sugar, the Carbonate forming at least 37 per cent. of the mixture.

Sulphate of Iron, 2; Carbonate of Ammonia, 1¼; Boiling Distilled Water, 320; Refined Sugar, 1: dissolve the Sulphate of Iron and the Carbonate of Ammonia, each separately in one-fourth of the water, and mix thoroughly the two solutions in a deep cylindrical and closed vessel; in twenty-four hours decant the supernatant liquid, and pour the remainder of the water on the precipitate, stir well, and again pour off the liquid when clear. Collect the deposit on a calico filter, press, and rub with the sugar in a porcelain mortar. Dry it at a temperature not exceeding 212°.

The Sugar protects the Carbonate of Iron from oxidation.

Small coherent lumps of a grey-brown colour, with a sweet, very feeble, chalybeate taste.

Dissolves with effervescence in warm diluted Hydrochloric Acid.

*Test.*—Its solution in Hydrochloric Acid gives but a very slight precipitate with the Chloride of Barium—indicating a trace only of Sulphate. 20 grains dissolved in excess of Hydrochloric Acid, and diluted with water, continue to give a blue precipitate with Ferridcyanide of Potassium, until at least 208 grain-measures of the volumetric solution of Bichromate of Potash have been added; that is to say, it must contain sufficient Protosalt of Iron to require this quantity of Bichromate of Potash to convert it all into persalt.

### *Medicinal Properties.*

An excellent chalybeate; readily soluble in acids. Not astringent. Useful in anæmic amenorrhœa.

*Dose.*—5 to 20 grs.

(Ferrum Carbonicum Saccharatum, Austr. contains ⅓ to ½ of Carbonate of Iron; Ger. contains ⅓; Russ. contains ⅒; Dan. Hydrato-carbonas Ferrosus Saccharatus; not in others.)

INCOMPATIBLES.—Acids and Acidulous Salts; all Vegetable Astringents.

## Preparations.

**MISTURA FERRI COMPOSITA.** Opaque, bluish-green; best made when wanted.

Sulphate of Iron, 25 grs.; Carbonate of Potash, 30 grs.; Myrrh, 60 grs.; Sugar, 60 grs.; Spirit of Nutmeg, 4 drms.; Rose Water, 9¼ ozs.

Reduce the Myrrh to powder, add the Carbonate of Potash and Sugar, and triturate them with a small quantity of Rose Water so as to form a thin paste, then gradually add more Rose Water and the Spirit of Nutmeg, continuing the trituration and further addition of Rose Water until about eight fluid ounces of milky liquid are formed, then add the Sulphate of Iron previously dissolved in the remainder of the Rose Water, and cork the bottle immediately.

The Spirit of Nutmeg in this formula is increased to four times the amount of Brit. 1864, because the formula in Brit. Ph. 1867 contains five times less of the Oil.

It becomes reddish-brown by keeping, if air is not excluded.

*Dose.*—1 to 2 ozs. as a stimulating tonic.

(Dan. similar to Brit., but with three times as much Sugar; U.S. nearly same strength as Brit., but flavoured with Sp. of Lavender.)

**PILULA FERRI CARBONATIS.** Black; gets hard by keeping.

Saccharated Carbonate of Iron, 4; Confection of Roses, 1: mix. =(1 in 1¼).

*Dose.*—5 to 20 grs., as a tonic for delicate females and children.

(Belg. Pil. Carbonatis Ferrosi; Fr. Pilules de Protocarbonate de Fer; Ger. and U.S.; all are made from Sulphate of Iron, Carbonate of Soda, Honey and Sugar; not in others.)

## FERRI ET AMMONIÆ CITRAS.

### CITRATE OF IRON AND AMMONIA.

In thin transparent scales of a deep red colour, slightly sweet and astringent in taste.

Solubility, 10 in 5 of water; 5 dissolved in 7½ of water measure 10; almost insoluble in Rectified Spirit.

*Test.*—Heated with Solution of Potash, it evolves Ammonia and deposits Peroxide of Iron; the alkaline solution from which the Iron has separated does not, when slightly supersaturated with Acetic Acid, give any crystalline deposit—distinguishing it from Tartrate. When incinerated with exposure to air, it leaves not less than 27 per cent. of Peroxide of Iron, which is not alkaline to litmus.

### *Medicinal Properties.*

As a blood restorer it is a very effectual salt, and it possesses scarcely any astringency: it may often be given when the stomach will not bear the more astringent preparations of iron.

*Dose.*—5 to 10 grs.; becomes moist if kept in paper.

(Fr. Citrate de Fer Ammoniacal; Ger. Ferrum Citricum Ammoniatum; Russ. Ferrum Citricum Oxydatum Ammoniatum; U.S.; not in others.)

In prescribing the above Salt to be taken during effervescence, care must be taken to put the Salt of Iron into the Citric Acid Solution, and not into the Bicarbonate of Potash Solution, because if it be put into the latter, Carbonic Acid will be given off and the bottle burst. Tincture of Orange is the best flavouring agent, but prescribers are in the habit of ordering this Salt in Tincture of Orange alone, in which it will not dissolve, therefore the division into doses is impracticable. The addition of only a small quantity of water will make the solution perfect.

INCOMPATIBLES.—Mineral Acids, Vegetable Astringents, and fixed Alkalies.

### Preparation.

**VINUM FERRI CITRATIS.** Deep brown.

Citrate of Iron and Ammonia, 160 grs.; Orange Wine, 20 ozs.; dissolve, and after three days filter. =(1 gr. in each fl. drm.).

*Dose.*—1 to 4 drms.

(Fr. 1 and 200 of Malaga; not in others.)

### Not Official.

HAUSTUS FERRI ET AMMONIÆ.—Citrate of Iron and Ammonia, 8 grs.; Carbonate of Ammonia; 2 grs.; Spirit of Chloroform, 10 minims; Infusion of Quassia to 1 oz. —*St. Bartholomew's Hospital. Samaritan Hospital.*

## FERRI ET QUINIÆ CITRAS.

### CITRATE OF IRON AND QUININE.

scales of a greenish golden-yellow colour, somewhat deliques-
tirely soluble in cold water.

ility, 2 in 1 of water.

—Taste bitter as well as chalybeate. Its solution is precipi-
ddish-brown by Solution of Soda, and blue by Ferro- and Ferrid-
of Potassium. When burned with exposure to air, it leaves
ue (Oxide of Iron) which yields nothing to water. 50 grains
ed in an ounce of water, and treated with a slight excess of
nia, give a white precipitate, which, when collected on a filter
ried, weighs 8 grains (Quinia). The precipitate is almost
y soluble in pure Ether. When dissolved by the aid of an
orms a solution which, being decolorized by a little purified
charcoal, turns the plane of polarization strongly to the left
nia turns it to the right).

*Medicinal Properties.*

ngent and tonic, combining the properties of both Iron and

ains contain 1 grain of Quinine.

–5 to 10 grains as a tonic, three times a day, in solution or in pill.

Belg. Ger. Russ. and U.S.; not in others.)

PATIBLES.—Alkalies and their Carbonates, Tannic Acid, Vegetable Astrin-

**Not Official.**

RA FERRI ET QUINIÆ EFFERVESCENS.—Citrate of Iron, 5 grs.; Sulphate
a, 1 gr.; Citric Acid, 10 grs.; Water, 1 oz., to be taken with 10 grs. of
ate of Soda.—*Consumption Hospital.*

## FERRI IODIDUM.

### IODIDE OF IRON.

q. 310, with about 18 per cent. of water of crystallization, and
a little Oxide of Iron.

talline, green with a tinge of brown, inodorous, deliquescent.

ists of 1 Iron, 4½ Iodine, and 1 Water.

Iron Wire, 1; Iodine, 2; Distilled Water, 10: introduce the
odine, and 8 of the water into a flask, heat it gently for about
nutes, then boil until the red colour is gone. Filter through
into a polished iron dish, wash with the rest of the water,
il until a drop of the solution taken out with an iron wire
es on cooling; pour on porcelain; when cool, break into frag-
and keep in a stoppered bottle.

bility, 1 in 1 of water.

—It dissolves almost entirely in water, leaving but a very small
y of red sediment.

### *Medicinal Properties.*

It combines the properties both of Iodine and Iron, and is a most valuable tonic in the treatment of scrofulous diseases in cachectic subjects requiring Iron. It was first prepared for medicinal purposes by the Author, who devised a mode of keeping the solution in water perfectly neutral at all times, by merely putting into it a coil of soft iron wire, reaching from the surface to the bottom. Dr. A. T. Thomson first prescribed it.

*Dose.*—1 to 5 grs. in solution; the pill is rather a questionable mode of administering it.

(Belg. Dan. Fr. Ger. Russ.: not in others. Ferrum Iodatum Saccharatum, Austr. Ger. and Russ.: 5 containing 1 of Iodide.)

INCOMPATIBLES.—Acids, Acidulous Salts, Alkalies and their Carbonates, Lime Water, Vegetable Astringents.

### Preparations.

**PILULA FERRI IODIDI.** Black.

Fine Iron Wire, 40 grs.; Iodine, 80 grs.; Refined Sugar in powder, 70 grs.; Liquorice Root in powder, 140 grs.; Distilled Water, 50 minims: agitate the Iron with the Iodine and the Water in a strong stoppered ounce phial, until the froth becomes white. Pour the fluid upon the Sugar in a mortar, triturate briskly, and gradually add the Liquorice.

3½ grains contain 1 gr. of the Iodide.

*Dose.*—3 to 8 grs.

(Dan. Fr. and U.S.; each pill contains about ¾ grain Iodine, and is coated with Bals. Tolu dissolved in Ether; not in others.)

**SYRUPUS FERRI IODIDI.** Colourless, and keeps so in well-filled bottles; becomes coloured in bottles partly filled, unless a coil of Iron is kept in it, but exposure to light will take out the colour.

Fine Iron Wire, 1; Iodine, 2; Refined Sugar, 28; Distilled Water, 13. Make a syrup with the sugar and 10 of the water, and keep it hot. Digest the iron wire, the iodine, and 3 of water, in a flask at a gentle heat, shake them together until the froth of the mixture becomes white, filter whilst still hot into the syrup, and mix. The product should be made up by water to weigh 43, or to measure 31½. Sp. g. 1·385.

Each fluid drachm contains 4·3 grains of the Iodide.

*Dose.*—20 to 60 minims.

(Brit. 5·7 per cent. of Iodide of Iron; Austr. 12 p. c.; Belg. 0·3 p. c.; Dan. 10 p. c.; Fr. 0·5 p. c.; Ger. and Russ. 5 p. c.; U.S. about 10 p. c.; all by weight.)

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Not Official.

## LIQ. FERRI IODIDI.

Treat the Iodine and Iron as directed in the formula for Syrup, omit the Sugar, and add a sufficient quantity of water to make the measure up to 31½ ozs.

It is the same strength as the Syrup. A coil of Iron wire must be made to traverse the whole of the column of the solution to keep it neutral.

*Dose.*—20 to 60 minims in a wineglassful of *cold* water; the taste is like that of water fresh from a chalybeate spring.

## FERRI OXIDUM MAGNETICUM.

MAGNETIC OXIDE OF IRON.

*Syn.* Ferri Oxidum Nigrum, *Edin.*

Magnetic Oxide of Iron, $Fe_3O_4$, eq. 232, combined with about 20 per cent. of water of hydration, and containing some Peroxide of Iron.

A brownish-black powder, strongly attracted by the magnet.

It dissolves without effervescence in Hydrochloric Acid, diluted with half its bulk of water, and gives blue precipitates with Ferrocyanide and Ferridcyanide of Potassium.

*Test.*—20 grains dissolved in Hydrochloric Acid continue to give a blue precipitate with Ferridcyanide of Potassium, until 230 grain-measures of the volumetric solution of Bichromate of Potash have been added; that is to say, there should be sufficient Protoxide present to require that quantity of Bichromate to peroxidize it (equal to 24·6 per cent.).

### *Medicinal Properties.*

In tic-douloureux and other neuralgic affections. Useful when it is desirable to continue the use of iron for a long time, or to give it in large doses.

*Dose.*—5 to 10 grs. twice or thrice daily in water.

(Austr. Ferrum Oxydato-oxydulatum; Belg. Oxydum Ferri Nigrum; Fr. Oxyde Noir de Fer; not in others.)

This preparation was in great repute with Dr. Jephson, and is certainly more to be depended on than the Peroxide: it is the Ferroso-ferric Oxide of Berzelius, a compound of Protoxide and Peroxide of Iron.

### Preparation.

**MISTURA FERRI AROMATICA.** Intense brown.

Pale Cinchona Bark, in powder, 4; Calumba, in powder, 2; Cloves, bruised, 1; Iron Wire, 2; Compound Tincture of Cardamoms, 12; Tincture of Orange Peel, 2; Peppermint Water, 50: macerate the first four ingredients in the last one for three days in a closed vessel, agitating occasionally, filter, add the tinctures, and make up with Peppermint Water to 64.

*Dose.*—1 to 2 oz.

Much valued in Dublin as a tonic.

## FERRI PERCHLORIDI FORTIOR LIQUOR.

STRONGER SOLUTION OF PERCHLORIDE OF IRON.

Perchloride of Iron, $Fe_2Cl_6$, eq. 325, in solution in water.

Miscible with water and alcohol in all proportions.

Iron Wire, 2 ozs.; Hydrochloric Acid, 12 ozs.; Nitric Acid, 9 drms.; Distilled Water, 8 ozs. Mix 8 ozs. of the Hydrochloric Acid with the

Water, and pour the mixture on the Iron Wire, applying a gentle heat, so that the whole of the metal may be dissolved; filter the solution, and add to it the remainder of the Hydrochloric and Nitric Acids; heat the mixture briskly, until on the sudden evolution of red fumes the liquid becomes of an orange-brown colour, then evaporate by the heat of a water bath until it is reduced to 10 fluid ounces.

*Test.*—Sp. g. 1·44.—A fluid drachm diluted with 2 ounces of water gives, upon the addition of an excess of Solution of Ammonia, a reddish-brown precipitate, which, when well washed and incinerated, weighs 15·62 grains.

(Austr. and Fr. sp. g. 1·260; Belg. sp. g. 1·480; Dan. sp. g. 1·298—1·302, and contains about 10 per cent. of Iron; Ger. sp. g. 1·480 to 1·484, and contains 15 per cent. of Iron; Russ. sp. g. 1·290—1·300, and contains about 10 per cent. of Iron; U.S. sp. g. 1·355.)

It is rather acid, and if desired to be more neutral, the solution can be evaporated lower, say to 4 or 5 ozs., and then made up to 10 by the addition of water.

The neutral solution is preferred to apply to diphtheric patches, for injecting nævi, and generally as a powerful styptic.

Neutral Solution 2, Water 1, mixed, is the French Solution 30° Beaumé, sp. g. 1·260.

## Preparations.

**LIQUOR FERRI PERCHLORIDI.** Pale brown. Of the same strength as Tinctura.

Strong solution of Perchloride of Iron, 1; Distilled Water, 3.
Sp. g. 1·105. =(1 in 4).

*Dose.*—10 to 30 minims.

This preparation has been introduced in order to save the expense of the Spirit used in the Tincture, which for hospital use may be worth consideration.

**TINCTURA FERRI PERCHLORIDI.** Light brown.

Strong Solution of Perchloride of Iron, 1; Rectified Spirit, 3: mix. Add the Solution to the Spirit. =(1 in 4).

Sp. g. ·992, more correctly ·995.

*Dose.*—10 to 30 minims in Water.

(Belg. from the Salt; Dan. Solutio Chloreti Ferrici Spirituosa; Ger. and Russ. Tinct. Ferri Chlorati; U.S. Tinctura Ferri Chloridi. Not in others.)

### *Medicinal Properties.*

The Tincture of Iron has long been considered the most valuable of all the Iron preparations; it is given in diabetes, acting especially on the kidneys in albuminuria, the urethra in gleet, and in giving tonicity to the bladder; is slightly aphrodisiac; in passive hemorrhage and as a general tonic, having properties in common with the numerous salts of iron; highly useful in anæmia, chlorosis, and epilepsy.

It has been given with success in acute Rheumatism.—*B. M. Journ.* Oct. 2, 1875; May 6, 1876.

*Dose.*—10 to 30 minims in Water.

If given during effervescence with Bicarbonate of Soda, 9 grains are about equal to 60 minims of Tincture. If ½ oz. of Glycerine be added to an 8 oz. mixture it corrects the astringent taste of the Iron.

**Incompatibles.**—Alkalies and their Carbonates, Lime Water, Carbonate of Lime, Magnesia and its Carbonate; astringent vegetables render it black, and mucilage decomposes it.

Preparations of Iron can be given in Infusion of Quassia, or Calumba, but they tinge Infusion of Chiretta and Hops, and change to brown or black those of Chamomile, Cusparia, Gentian, Orange, Cascarilla, Cloves, Digitalis, Bark, and all astringent infusions.

Not Official.

**Liquor Ferri Chloroxydi.**—A solution in water of a basic Chloride of Iron. The solution contains about the same quantity of Iron as Liquor Ferri Perchloridi, but much less Chlorine.

Exception has been taken to Dialysed Iron, because it has been deprived of its acid; this preparation may be considered as a medium between Liquor Ferri Perchloridi and Dialysed Iron.

*Dose.*—10 to 30 minims.

**Liquor Ferri Dialysatus.**—A weaker solution of Chloroxyde of Iron dialyse almost free from acid; it has no unpleasant taste. Each fluid drachm contain about 2 grains of Oxide of Iron.

*Dose.*—10 to 30 minims.

**Tinct. Ferri Ammonio-Chloridi.**—*Dose*, ½ to 1 drm.; rarely prescribed.

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## FERRI PERNITRATIS LIQUOR.

### SOLUTION OF PERNITRATE OF IRON.

Pernitrate of Iron, $Fe_2 6NO_3$, eq. 484, in solution in Water.

Iron Wire, 1; Nitric Acid, 4½; Distilled Water, *q. s.*: dilute the Nitric Acid with 16 of water, dissolve the Iron (take care to moderate the action by occasionally adding part of the water), filter, and add water to make up the measure to 30.

A clear solution, of reddish-brown colour.

*Test.*—Sp. g. 1·107. 1 fluid drachm treated with an excess of Solution of Ammonia gives a precipitate which, when washed, dried, and incinerated, weighs 2·6 grains. It gives no precipitate with Ferridcyanide of Potassium—indicating absence of Protosalt.

*Medicinal Properties.*

Tonic and astringent. Useful in chronic diarrhœa, especially when occurring in delicate and nervous females, when there are no inflammatory symptoms; also in menorrhagia; also, both internally, and as an injection in leucorrhœa, the injection being diluted so as to cause only slight heat and smarting.

*Dose.*—10 to 40 minims.

(U.S. Liquor Ferri Nitratis, half the strength, sp. g. 1·060—1·070; Fr. and Belg. sp. g. 1·145; not in others.)

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## FERRI PEROXIDUM HUMIDUM.

### MOIST PEROXIDE OF IRON.

Hydrated Peroxide of Iron, with about 86 per cent. of uncombined water.

Solution of Persulphate of Iron, 4; Solution of Soda, 33, or *q. s.*; Distilled Water, 20: mix the solution of Iron and the Water; pour the mixture into the solution of Soda, stirring briskly. Let it stand for two hours, stirring occasionally; collect the precipitate on a calico filter, wash until it ceases to give a precipitate with Chloride of Barium. Keep it (without drying) in a porcelain pot, the lid being closed.

Should be recently made.

A soft moist pasty mass, of a reddish-brown colour.

Solubility: dissolves readily in diluted Hydrochloric Acid without the aid of heat.

*Test.*—Free from grittiness. Leaves on calcination about 12 per cent. of Peroxide of Iron.

### *Medicinal Properties.*

Not eligible as a ferruginous preparation. It is, however, valuable as an antidote to Arsenic: it operates by producing an insoluble, and therefore inert, Subarseniate of Protoxide of Iron.—See also page 5.

*Dose.*—¼ to ½ oz.

(In all the Pharmacopœias except Austr.; see also Antidotum Arsenici, page 5.)

As an antidote, 2 to 4 drms. repeated until effective. A quantity equal at least to twelve times the supposed quantity of the arsenic taken may be given.

### Not Official.

Iron Sugar (Soluble Oxide of Iron).—Monsieur Chauteau's soluble Hydrated Oxide of Iron granulated with Sugar Candy.

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## FERRI PEROXIDUM HYDRATUM.

### HYDRATED PEROXIDE OF IRON.

$Fe_2O_3H_2O$, eq. 178.

A reddish brown powder, without taste.

Moist Peroxide of Iron dried at 212° F., and reduced to powder.

Solubility: dissolves completely though slowly with the aid of heat, in Hydrochloric Acid, diluted with half its volume of water.

*Test.*—Heated to dull redness in a test tube it gives off moisture—indicating that it has not been dried at too high temperature. The solution in Hydrochloric Acid gives no precipitate with Chloride of Barium, nor with Ferridcyanide of Potassium—indicating absence of Sulphuric Acid and Protoxide.

*Dose.*—5 to 30 grs.

(Ger. and Russ. Ferrum Oxydatum Hydratum; called also Crocus of Mars, Rouge.)

### Preparation.

**EMPLASTRUM FERRI.** Brownish-red. *Syn.* Empl. Thuris; Empl. Roborans.

Peroxide of Iron, 1; Burgundy Pitch, 2; Lead Plaster, 8: melt the pitch and plaster together, and stir in the oxide. =(1 in 11).

(Same as U.S.; Fr. Emplâtre de Canet, about 1 in 5; not in others.)

Used as a strengthening plaster, and to afford mechanical support to relaxed muscles.

## FERRI PHOSPHAS.

### PHOSPHATE OF IRON.

Phosphate of Iron, $Fe_3P_2O_8$, eq. 358; partially oxidized.

A slate-blue amorphous powder. Becomes of a green hue by keeping.

Solubility: soluble in acids, insoluble in water.

*Test.*—When it is digested in Hydrochloric Acid with a lamina of pure Copper, a dark deposit does not form on the metal—indicating absence of Arsenic, also distinguishing it from the Arseniate of Iron. 20 grains dissolved in Hydrochloric Acid continue to give a blue precipitate with red Prussiate of Potash until 250 grain-measures of volumetric Solution of Bichromate of Potash have been added—indicating the quantity of Ferrous Phosphate present, which should be equal to 45 per cent.

### *Medicinal Properties.*

Tonic. Possesses the general properties of the ferruginous preparations. Given with advantage in amenorrhœa, some forms of dyspepsia, diabetes, and rachitis. It diminishes voracious appetite; it invigorates and increases the power of digestion.

*Dose.*—5 to 10 grs.

(In all the Pharmacopœias except Dan.)

### Preparation.

**SYRUPUS FERRI PHOSPHATIS.** Colourless when fresh, but gets brown and deposits by keeping.

Granulated Sulphate of Iron, 224 grs.; Phosphate of Soda, 200 grs.; Acetate of Soda, 74 grs.; Diluted Phosphoric Acid, 5½ ozs.; Refined Sugar, 8 ozs.; Distilled Water, 8 ozs. Dissolve the Sulphate of Iron in 4 ounces of the Water, and the Phosphate and the Acetate of Soda in the remainder: mix the two solutions, and, after carefully stirring, transfer the precipitate* to a calico filter, and wash it with Distilled Water till the filtrate ceases to be affected by Chloride of Barium; then press the precipitate strongly between folds of bibulous paper, and add to it the Diluted Phosphoric Acid; as soon as the precipitate is dissolved, filter the solution, add the Sugar, and dissolve without heat. The product should measure exactly 12 ounces.

Each fluid drachm contains about 1 grain of Phosphate of Iron.

*Dose.*—1 to 4 drms.

(In no other Pharmacopœia.)

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* That the whole of the iron is not precipitated can be seen by adding solution of Phosphate of Soda to the filtrate, when a further quantity of Phosphate of Iron will be precipitated.

Not Official.

Parrish's Chemical Food.—This preparation has been made by Mr. Parrish and imported by the Author for over 20 years; a few years ago Mr. Parrish effected an arrangement to have it prepared in the Author's laboratory.

It contains Phosphate of Iron, Phosphate of Lime, Phosphate of Soda, and Phosphate of Potash.

The published formula is stated by Mr. Parrish to give a syrup containing in each fluid drachm 1 grain Phosphate of Iron, 2½ grains Phosphate of Lime, but it does not yield the theoretical quantities.

*Dose.*—1 to 2 drms.

Syrupus Ferri Phosphatis c. Quiniâ et Strychniâ. (Dr. Easton's formula.)—Sulphate of Iron, 300 grs.; Phosphate of Soda, 360 grs; Sulphate of Quinia, 192 grs.; Diluted Sulphuric Acid, a sufficiency; Solution of Ammonia, a sufficiency; Strychnia, 6 grs.; Diluted Phosphoric Acid, 14 ozs.; White Sugar, 14 ozs. Dissolve the Sulphate of Iron in 1 oz. boiling Water, and the Phosphate of Soda in 2 ozs. boiling Water. Mix the solutions, and wash the precipitated Phosphate of Iron till the washings are tasteless. With sufficient Diluted Sulphuric Acid dissolve the Sulphate of Quinia in 2 ozs. Water. Precipitate the Quinia with Ammonia Water, and carefully wash it. Dissolve the Phosphate of Iron and the Quinia thus obtained, as also the Strychnia, in the Diluted Phosphoric Acid; then add the Sugar and dissolve the whole, and mix without heat. The above Syrup contains about 1 gr. Phosphate of Iron, 1 gr. Phosphate of Quinia, and $\frac{1}{32}$ gr. of Phosphate of Strychnia in each fluid drachm. The dose might therefore be a teaspoonful three times a day.

The quantity of Phosphate of Soda is not sufficient to precipitate the whole of the iron.

Syrupus Ferri Phosphatis c. Manganesio.—Phosphate of Iron, 72 grs.: Phosphate of Manganese, 48 grs.; Syrupy Phosphoric Acid, 8 drms.; Syrup, 10 fl. ozs.; Water, 8 drms. Rub the powders with the water, add the acid, and filter into the syrup.

*Dose.*—1 drm.

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## FERRI SULPHAS.

### SULPHATE OF IRON.

$FeSO_4.7H_2O$, eq. 278.

Pale bluish-green oblique rhombic prisms, with little or no efflorescence.

Solubility, 1 in 1½ of Water: the solution rapidly oxidizes on exposure; insoluble in Alcohol and Proof Spirit, hence it cannot be dissolved in tinctures.

*Test.*—Crystals free from opaque rust-coloured spots, and dissolving in water without leaving any ochry residue. The aqueous solution gives no precipitate with Sulphuretted Hydrogen, and one nearly white with Ferrocyanide of Potassium, and a deep blue with Ferridcyanide of Potassium.

### *Medicinal Properties.*

In harmony with the properties of iron salts in general, it is a powerful astringent, but is apt to irritate the stomach.

*Dose.*—1 to 5 grs. in pill, or recent solution.

(In all the Pharmacopœias.)

Dr. F. Farre gives 5 grains, with 3 grains of Sulphate of Quinia, four or five times a day, for enlarged spleen.

### Preparations.

**RRI SULPHAS EXSICCATA.** Greyish cream colour.

Sulphate of Iron exposed in a porcelain capsule to a heat commenc-g at 212° F., which may be raised to 400° until aqueous vapour ceases be given off. Reduce to powder. Keep in stoppered bottles.

Prescribed in pills. 3 grains, which are equal to 5 of the crystallized salt, make a nice pill with 2 grains of Manna.

*Dose.*—½ to 3 grains.

(Belg.; Dan. dried at 104° — 122° F.; Ger. dried at 212° F.; Russ. dried at 77° — 86° F.; U.S. dried at 300° F.; not in others.)

**IQUOR FERRI PERSULPHATIS.** Dark brown.

Sulphate of Iron, 8; Sulphuric Acid, ¾; Nitric Acid, ¾; Distilled Vater, 12. Add the sulphuric acid to 10 of the water, and dissolve ie sulphate of iron in the mixture with the aid of heat. Mix the itric acid with the remaining 2 of the water, and add the diluted acid to ie solution of sulphate of iron. Concentrate the whole by boiling, ntil, by the sudden disengagement of ruddy vapours, the liquid ceases be black, and acquires a red colour. A drop of the solution is now be tested, with Red Prussiate of Potash, and if a blue precipitate rms, a few additional drops of Nitric Acid should be added and the oiling renewed, in order that the whole may be converted into Persulhate of Iron. When the solution is cold, make up the quantity to 11 y the addition, if necessary, of Distilled Water.

Introduced for making several preparations of Iron.

N.B.—The quantity of Nitric Acid ordered is much too small to peroxidize the ron.

This solution is a good styptic.

#### Not Official.

MISTURA FERRI LAXANS.—Sulphate of Iron, 2 grs.; Sulphate of Magnesia, 1 drm., alphuric Acid, 3 minims; Spirit of Chloroform, 20 minims; Peppermint Water to oz.—*St. Mary's Hospital.*

LOTIO FERRI SULPHATIS.—Sulphate of Iron, 2 grs.; Water, 1 oz.—*St. Bartholo-ew's Hospital.*

## FERRI SULPHAS GRANULATA.

### GRANULATED SULPHATE OF IRON.

$FeSO_4.7H_2O$, eq. 278.

Small granular crystals of a pale green colour, which are not so able to become brown as those of the Ferri Sulphas.

Iron Wire, 4; Sulphuric Acid, 4; Distilled Water, 30; Rectified pirit, 8. Pour the water on the iron placed in a porcelain capsule; dd the acid, and when the disengagement of gas has nearly ceased, oil for ten minutes; filter the solution into a jar containing the spirit, stirring the mixture so that the salt shall separate in minute granular crystals. Pour off the liquid, and place the crystals on filtering-paper over porous bricks to dry. Keep in stoppered bottles.

Solubility, 1 in 1½ of Water; insoluble in Rectified Spirit.

*Test.*—Free from opaque rust-coloured spots, and dissolving in water without leaving any ochry residue. The aqueous solution gives no precipitate with Sulphuretted Hydrogen, and one nearly white with Ferrocyanide of Potassium—indicating absence of Copper and Persulphate of Iron.

*Medicinal Properties.*—Same as Ferri Sulphas.

*Dose.*—3 to 5 grs.

(Not in other Pharmacopœias.)

## FERRUM REDACTUM.

### REDUCED IRON.

Metallic Iron, with a variable amount of Magnetic Oxide of Iron. A fine greyish-black powder, strongly attracted by the magnet, and exhibiting metallic streaks when rubbed with firm pressure in a mortar. Made by passing dry Hydrogen over Peroxide of Iron in a heated gun-barrel. It must be carefully preserved from the air.

It dissolves in Hydrochloric Acid with the evolution of Hydrogen, and the solution gives a light blue precipitate with Ferrocyanide of Potassium.

*Test.*—10 grains added to an aqueous solution of 50 grains of Iodine and 50 grains of Iodide of Potassium, and digested with them in a small flask at a gentle heat, leave not more than 5 grains undissolved, which should be entirely soluble in Hydrochloric Acid. Is easily ignited and converted into brown oxide.

### *Medicinal Properties.*

It is one of the most powerful remedies in restoring the condition of the blood in all anæmic states of the system. It does not, however, possess the astringent properties of other preparations of Iron, and therefore cannot be used as a substitute in passive hemorrhage. It is chiefly employed in chlorosis, amenorrhœa, chorea, and enlargement of the spleen following intermittent fever. There is no pulverulent state of Iron so convenient as this for children, as it has no taste, and a very small dose is required.

*Dose.*—1 to 5 grs. several times daily, in powder or pill, or for children ¼ to 1 gr.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

1 grain of this is equal, medicinally, to 5 grs. of Ammonio-Citrate of Iron.

**TROCHISCI FERRI REDACTI.** Iron-grey.

Reduced Iron, 720 grs.; Refined Sugar, in powder, 25 ozs.; Gum Acacia, in powder, 1 oz.; Mucilage of Acacia, 2 ozs.; Distilled Water, 1 oz., or sufficient. Mix the iron, sugar, and gum, and add the mucilage and water to form a proper mass. Divide it into 720 lozenges, and dry them in a hot-air chamber with a moderate heat.

Each lozenge contains 1 gr. of reduced Iron.

*Dose.*—1 to 6 lozenges.

Not Official.

**Pilula Ferri Redacti.**—Reduced Iron, 3 grs.; Balsam of Peru, ½ minim; Starch, *q.s.*: in one pill.—*St. Bartholomew's Hospital.*

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## FERRUM TARTARATUM.

### TARTARATED IRON.

*Syn.* Ferri Potassio-Tartras.

Thin transparent scales of a deep garnet colour.

Solubility, 1 in 4 of Water, sparingly in Spirit.

*Test.*—By incinerating 50 grains of this preparation at a red heat, and washing what is left with distilled water and again incinerating, a residue of Peroxide of Iron is obtained, weighing 15 grains.

*Dose.*—5 to 10 grs.

(Austr. Kalium Ferro-tartaricum; Belg. Tartras Potassæ et Ferri; Dan. Tartras Ferrico-Kalicus; Fr. Tartrate Ferrico-Potassique; Ger. Tartarus Ferratus; Russ. Ferro-Kali Tartaricum; U.S. Ferri et Potassii Tartras.)

**VINUM FERRI.** Intense olive-brown.

Fine Iron Wine (No. 35), 1 oz.; Sherry, 20 ozs.: digest thirty days with frequent agitation, the wire not being wholly immersed. The bottle to be uncorked after each agitation.

*Dose.*—1 to 4 drms.

(Not in other Pharmacopœias.)

*Medicinal Properties.*

Useful in restoring the blood, when a slight astringent is desired. May be prescribed with alkalies.

**Incompatibles.**—Mineral Acids, Lime Water, and all astringent vegetable preparations.

N.B.—The old Vinum Ferri, made with Malaga, is much sweeter than the British Pharmacopœia, and is sometimes ordered on that account.

Not Official.

**Malate of Iron Wine.**—In Devonshire a quantity of Iron Wire or Nails is digested in a bottle of Cider for a week, and a wineglassful three times a day is the dose.

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## FICUS.

### FIG.

The dried fruit of *Ficus Carica,* imported from Smyrna.

*Medicinal Properties.*

Nutritious, laxative, and demulcent. Chiefly used medicinally in constipation. Cut open and heated, it is a convenient suppurative cataplasm.

Contained in Conf. Sennæ.

## FILIX MAS.

### MALE FERN.

The dried rhizome, with the bases of the footstalks and portions of the root-fibres, of the perennial *Aspidium Filix-mas*, collected late in summer or autumn. Indigenous.

Only the green rhizome should be used: the brown stipes are inert. U.S.

*Medicinal Properties.*

The powder of the rhizome is slightly tonic and astringent; chiefly used as an anthelmintic and in tænia. It apparently acts by destroying the worm, the expulsion being aided by purgatives. The Extract is the best form.

*Dose.*—Of the powder, 60 to 180 grs.

(In all the Pharmacopœias; Fr. Fougère.)

### Preparation.

**EXTRACTUM FILICIS LIQUIDUM.** Intense green. *Syn.* Oil of Male Fern.

Male Fern, in coarse powder, 1; Ether, 2½, or a sufficiency: pack the male fern closely in a percolator and pass the ether slowly through it until it passes colourless; distil off the ether, and the liquid extract remains.

*Pharm. Dose, 15 to 30 mins.*—60 to 80 minims in milk, or made into an emulsion with 1 to 2 drms. of very fresh mucilage, or ½ drm. to 1 drm. of powdered Acacia, or ½ drm. of compound powder of Tragacanth, and with peppermint water or milk to form a 2 oz. draught; best given on an empty stomach, and for tænia one-third part of the dose should be given at intervals of half an hour.

(In all the Pharmacopœias except Dan.; Austr. Ext. Filicis Maris; Belg. Ext. Filicis Æther.; Fr. Extrait éthéré de Fougère Mâle; Ger. Extr. Filicis; Russ. Extract. Filicis Maris Æthereum; U.S. Oleoresina Filicis.)

Sold also in capsules, 15 minims in each.

### Not Official.

Mistura Filicis.—Oil of Male Fern, 2 drms.; Comp. Powder of Tragacanth, 1 drm.; Peppermint Water to 2 ozs.—*St. Mary's Hospital.*

## FŒNICULI FRUCTUS.

### FENNEL FRUIT.

The fruit of *Fœniculum dulce*, imported from Malta.

*Medicinal Properties.*

Stimulant, aromatic, and carminative. In action similar to Anise. Much employed as a corrigent of less agreeable medicines. In infantile cases the infusion is frequently employed as an enema for flatus.

(In all the Pharmacopœias.)

### Preparation.

**AQUA FŒNICULI.**

Fennel Fruit, bruised, 1; Water, 20: distil 10. =(1 in 10).

*Dose.*—1 to 2 oz.

(Austr. 1 in 20; Belg. and Dan. 1 in 10; Fr. 1 in 4; Ger. 1 in 30; Russ. with Oil, 1 in 1500; U.S. about 1 in 7, also with Oil about 1 in 500.)

Not Official.

## FUCUS VESICULOSUS.

Bladder-wrack collected from the rocks by the seaside and dried.

Extractum Liquidum.—Take of the plant dried and ground, 16; Rectified Spirit, 12; Distilled Water, 6: digest for seven days, press; again digest the marc for seven days in ¾ more of the Spirit and Water mixed, press and filter the mixed products.

*Dose.*—A teaspoonful, given for obesity; it also diminishes glandular swellings in scrofulous cases.

Smelling fresh seaweed is said to relieve hay asthma.

## GALBANUM.

### GALBANUM.

A gum resin obtained from an unascertained umbelliferous plant;[*] imported from India and the Levant; in masses of greenish-yellow tears, translucent. Usually heated to 212° F., and strained before using.

*Medicinal Properties.*

Similar to Assafœtida, but less powerful. A stimulating expectorant. Chiefly used in chronic affections of the bronchial mucous membranes; externally as a plaster to indolent swellings to promote resolution or suppuration.

(In all the Pharmacopœias.)

### Preparations.

**EMPLASTRUM GALBANI.** Buff colour.

Galbanum, 1; Ammoniacum, 1: melt together and strain, then add Yellow Wax, 1; Lead Plaster, 8, previously melted together, mix. =(1 in 11).

(In all the foreign Pharmacopœias, but the formulas are different.)

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[*] Probably Ferula galbaniflua and F. rubricaulis (*Hanbury*).

**PILULA GALBANI.**

The Pilula Galbani Composita had found a place in the London Pharmacopœia for the last half-century, and would naturally be looked for under Galbanum; its name, however, has been changed to Pilula Assafœtidæ Composita, and its composition somewhat altered. *See* Assafœtida.

Pil. Galbani Comp. U.S. Galbanum, 3; Myrrh, 3; Assafœtida, 1; Syrup, *q.s.*

### Not Official.

Ung. Galbani Comp.—Galbanum Plaster, 4 ozs.; Lead Plaster, 4 ozs.; White Wax, 4 ozs.; Liquid Extract of Opium, 1 drachm; Olive Oil, 20 ozs.: melt together and add Honey, 1 oz.

I am indebted to Mr. Samuel Wright for this formula. It is undoubtedly an excellent application for piles, boils, and carbuncles, for sore nipples and suppurating breasts.

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## GALLA.

### GALLS.

Excrescences on *Quercus infectoria*, caused by the punctures and deposited ova of *Diplolepis Gallæ-tinctoriæ;* chiefly from the Mediterranean and the East Indies.

Solubility: all the soluble matter of Galls is taken up by forty times their weight of boiling Water, and the residue is tasteless.

Galls contain about 35 per cent. of Tannin or Tannic Acid, and 5 per cent. of Gallic Acid, to which their therapeutic qualities may be attributed.

### *Medicinal Properties.*

Powerfully astringent. Useful in hemorrhages, as menorrhagia, hematuria, and hemoptysis; also in increased mucous and other discharges. Externally to suppress hemorrhage from the gums, nose, &c.; to lessen the discharge from mucous membranes, as in gleet, leucorrhœa, &c.; as a gargle, lotion, injection, or decoction, more or less diluted.

*Dose.*—(Of powder) 10 to 20 grs. several times a day.

(In all the Pharmacopœias.)

Incompatibles.—The Mineral Acids, Salts of Iron and Lead, Sulphate of Copper, Nitrate of Silver, Carbonates of Potash and Soda, Lime Water, Tartar Emetic, Ipecacuanha, and Opium, Infusions of Cinchona, Calumba, and Cusparia.

### Preparations.

**ACIDUM GALLICUM.** *See* ACIDUM GALLICUM.

**ACIDUM TANNICUM.** *See* ACIDUM TANNICUM.

**TINCTURA GALLÆ.** Deep brown.

Galls, in coarse powder, 1; Proof Spirit, 8: macerate for forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, let it drain, and then pour on the remaining spirit;

when it ceases to drop, press the marc and add proof spirit to make up 8. =(1 in 8).

*Dose.*—½ to 2 drms.

(Belg. Fr. Ger. and Russ. 1 and 5; U.S. about 1 in 7½ (all by weight); not in others.)

**UNGUENTUM GALLÆ.** Deep fawn colour.

Galls, in very fine powder, 80 grs.; Benzoated Lard, 1 oz.: mix. =(1 in 6½).

(U.S. 1 in 8; not in others.)

A useful application for hemorrhoids.

**UNGUENTUM GALLÆ CUM OPIO.** Brown.

Ointment of Galls, 1 oz.; Opium, in powder, 32 grs.; mix. =(Opium, 1 in 14⅔).

(Not in other Pharmacopœias.)

Applied to painful hemorrhoids.

Not Official.

**Decoctum Gallæ.**—Bruised Galls, 2½; Distilled Water, 40: boil to 20 and strain. = (1 in 8).

A most useful astringent lotion to suppress hemorrhage from the gums or nose, and to lessen discharges from mucous surfaces.

**Suppositoria** contain 5 grs. powdered Galls and 1 gr. Opium in each.

Not Official.

## GARCINIA PURPUREA.

### KOKUM BUTTER TREE.

Grows in the forests of Malabar, the Concans, and other parts of the Madras Peninsula.

The oil of the seeds (*Kokum Butter*) is obtained by first exposing the seeds for some days to the action of the sun to dry; they are then bruised and boiled in water, the oil collects on the surface and on cooling contracts into a solid cake. It melts at 98° F. The seeds yield about 10 per cent. of oil.

Not Official.

## GELSEMIUM.

The root of *Gelsemium sempervirens.*

### *Medicinal Properties.*

Useful in non-inflammatory toothache, and neuralgia of the nerves of the teeth.

**Tincture.**—Bruised Root, 2; Proof Spirit, 20: digest 7 days.

*Dose.*—10 to 20 mins.

**Antidotes.**—Galvanism, Aromatic Spirit of Ammonia.

A girl nine years old was killed in two hours by a dose of two drachms of the tincture.

# GENTIANÆ RADIX.

## GENTIAN ROOT.

The dried root of the perennial herb *Gentiana lutea*, collected in the mountainous districts of Central and Southern Europe.

The active principle Gentianine is a neutral crystalline body, soluble in Water and diluted Spirit, insoluble in Ether.

### *Medicinal Properties.*

Used in all cases of pure debility of the digestive organs, or when a general tonic is required.

*Dose.*—(Of the powder) 10 to 40 grs. This powder is prescribed in pills when a large quantity of Essential Oil is given, to absorb it.

(In all the Pharmacopœias.)

INCOMPATIBLES.—Sulphate of Iron, Nitrate of Silver, and Lead Salts.

### Preparations.

**EXTRACTUM GENTIANÆ.** Intense brown.

Gentian Root, sliced, 1; boiling Distilled Water, 10: infuse two hours, then boil fifteen minutes, press and strain, and evaporate over a water bath to a pilular consistence.

A good substance to add to powders to form them into pills.

*Dose.*—5 to 15 grs.

(Austr. Dan. Fr. Ger. Russ. and U.S. with cold water; Belg. with water, 68°—86° F.; U.S. also Fluid Extract).

**INFUSUM GENTIANÆ COMPOSITUM.**

Gentian Root, sliced, 60 grs.; Bitter Orange Peel, cut small, 60 grs.; fresh Lemon Peel, cut small, ¼ oz.; Boiling Water, 10 ozs.; infuse one hour and strain. =(1 in 80).

(U.S. about 1 in 33, with Coriander and percolation; not in others.)

*Dose.*—1 to 2 ozs.

**MISTURA GENTIANÆ.**

Gentian Root, sliced, ¼ oz.; Bitter Orange Peel, bruised, 30 grs.; Coriander, 30 grs.; Proof Spirit, 2 ozs.; cold Distilled Water, 8 ozs.; macerate the ingredients in the spirit for two hours, then add the water. Infuse for two hours and strain.

*Dose.*—½ to 1 oz.

(Is not strong enough to keep without change for more than fifteen or sixteen days.)

**TINCTURA GENTIANÆ COMPOSITA.** Deep brown.

Gentian Root cut small and bruised, 1½; Bitter Orange Peel, cut small and bruised, ¾; Cardamom Seeds, bruised, ¼; Proof Spirit, 20: macerate for forty-eight hours with 15 of the spirit, agitating occasionally, pack in a percolator, let it drain, and then pour on the remaining spirit; when it ceases to drop, press the marc and add proof spirit to make up 20. =(1 in 13½).

*Dose.*—1 to 2 drms.

(Fr. gives Brit. formula; U.S. 1 in 12·5; not in others; Belg. Dan. Fr. Ger. and Russ. have a simple Tincture, 1 and 5; all by weight.)

### Not Official.

**Mistura Gentianæ Alkalina.**—Dil. Hydrocyanic Acid, 3 minims; Bicarbonate of Soda, 15 grs.; Comp. Infusion of Gentian to 1 oz.—*Consumption Hospital.*

**Mistura Gentianæ et Sennæ.**—Infusion of Gentian, 6 drms.; Infusion of Senna, 3 drms.; Comp. Tinct. of Cardamoms, 1 drm.—*St. George's Hospital.*

## GLYCERINUM.

### GLYCERINE.

A sweet principle, $C_3H_8O_3$, eq. 92, obtained from fats and fixed oils. A clear colourless fluid, oily to the touch, without odour, of a sweet taste; when decomposed by heat it evolves intensely irritating vapours.

Solubility: in all proportions with water and Alcohol, but insoluble in Chloroform, Ether, and Oils.

It possesses great powers as a solvent, and is an excellent excipient for many medicinal substances. It dissolves its own weight of Borax, twice its weight of Crystallized Perchloride of Iron, and three times its weight of Carbolic Acid; it also dissolves Bromine and Iodine, the Iodide of Sulphur, the Chlorides of Potassium and Sodium, Salicylic Acid, Nitrate of Bismuth, the fixed alkalies, some of the alkaline earths, and a large number of neutral salts. It also dissolves the vegetable acids, and either suspends or dissolves the vegetable alkaloids. Many solutions are made with it for medicinal purposes, as of the Salts of Morphia, Quinia, Strychnia, Veratria, Atropia, Tannic and Gallic Acids, and Arsenic.

It is antiseptic, 1 part to 10 of Water preserving animal substances equal to spirit.

*Test.*—Sp. g. 1·250, and contains 5 per cent. of Water. Found in commerce, 1·260.

(Austr. and U.S. sp. g. 1·250; Belg. sp. g. not given; Dan. sp. g. 1·230; Fr. sp. g. 1·260; Ger. and Russ. sp. g. 1·230 to 1·250.)

It may be obtained of a specific gravity of 1·270, and even of 1·280, though with great difficulty; this very concentrated state is never required in medicine.

### *Medicinal Properties.*

Internally it is nutrient and demulcent. It prevents the formation of wind and acidity when taken in 1 or 2 drachm doses, and does not hinder digestion (*Lancet*, July 3, 1880, p. 6). M. Barton states (in the *American College and Clinical Record*) that four cases of trichinosis have recovered under large doses of glycerine. This treatment, which has been very widely recommended, is based on the fact that glycerine, applied to living trichinæ, at once shrivels them up and kills them. (*London Medical Record*, May 15, 1881, p. 193.) It has been proposed as a substitute for Cod-liver Oil, but its nutrient properties are far inferior. It is sometimes employed as a sweetening agent in the place of syrup.

As an external remedy it is highly valued, chiefly from its emollient and undrying properties. In skin diseases where emollient and soothing applications are required, as pityriasis, lepra, herpes, eczema, psoriasis, prurigo, and lichen: for this purpose 15 grs. of Isinglass dissolved in 1 oz. of Glycerine answers best. Excellent for chilblains.

Used in poultices ($\frac{1}{14}$ or $\frac{1}{18}$), it keeps them soft for a long time.

Introduced into the ear on cotton, it relieves deafness arising from dryness of the external meatus.

*Dose.*—10 minims to 1 drm. 1 to 2 drms. Br. Ph.

## Preparations.

| | |
|---|---|
| GLYCERINUM ACIDI CARBOLICI . . . . . | 1 acid in 4½. |
| GLYCERINUM ACIDI GALLICI . . . . . . | 1 acid in 4½. |
| GLYCERINUM ACIDI TANNICI . . . . . . | 1 acid in 4½. |
| GLYCERINUM AMYLI . . . . . . . . . | 1 Starch in 8½. |
| GLYCERINUM BORACIS . . . . . . . . . | 1 Borax in 4½. |

Contained in Linim. Potass. Iodidi cum Sapone.

The formulas for these are given under the several names quoted.

### Not Official.

GLYCERINE CREAM FOR CHILBLAINS.—Glycerine, 1; Soft Soap, 1; Cherry-laurel Water, 1: mix.

GLYCERINE CREAM WITH CAMPHOR.—Glycerine, 2; Camphor, 1; Rectified Spirit, 1: mix.

GLYCERINE OINTMENT.—Glycerine, 8; Spermaceti, 4; White Wax, 1: Oil of Almonds, 16: add the Glycerine to the melted ingredients, and stir briskly till cold.

UNGUENTUM GLYCERINI—
Austrian formula.—Glycerine, 15; Starch, 1.
German formula.—Glycerine, 10; Starch, 2; Water, 1.
Russian formula.—Glycerine, 14; Starch, 1; Water, 1.
(All by weight.) Heated together.
For chaps and excoriations.

GLYCERINE WITH ROSE WATER.—Glycerine, 1; Rose Water, 3: mix.

GLYCEROLE OF THE HYPOPHOSPHITES OF LIME, POTASH, AND SODA.—Hypophosphite of Lime, 1; Hypophosphite of Potash, 1; Hypophosphite of Soda, 1. Dissolve these in 40 of water, filter, and add sugar, 40; Orange-flower Water, 2; Cherry-laurel Water, 2: dissolve, and add Glycerine, 12, and strain.

*Dose.*—1 or 2 drms.

PESSUS GLYCERINI.—Glycerine, 2; Starch, 3; heat together until incorporated, and then press into moulds, weighing 2½ drms. for each pessary.

GELATINE BASIS FOR PESSARIES AND SUPPOSITORIES.—Soften 1 oz. of Gelatine by allowing it to soak in 1 oz. of water until it is absorbed, then dissolve in 3½ fl. ozs. of Glycerine by the heat of a water bath, then allow it to cool and solidify.

This can be medicated by melting it over a water bath and suspending or dissolving in it substances in fine powder, and then pouring the mixture into moulds.

# GLYCYRRHIZÆ RADIX.

LIQUORICE ROOT.

The root or underground stem of the perennial herb *Glycyrrhiza glabra*, fresh and dried; cultivated in England.

### *Medicinal Properties.*

An excellent demulcent as a decoction in catarrhal affections, irritation of the mucous membrane of the bowels and urinary passages. A useful adjuvant to decoctions of bitter or irritating vegetable substances. It is an important ingredient in Compound Decoction of Aloes. In the form of extract and its solution it is a domestic remedy for cough.

(In all the Pharmacopœias; Belg. Fr. and U.S. *G. glabra;* Russ. *G. echinata;* Austr. Dan. and Ger. both.)

Contained in Conf. Tereb., Dec. Sarsæ Co., Inf. Lini, Pilula Ferri Iodidi, Pil. Hydrargyri.

## Preparations.

**EXTRACTUM GLYCYRRHIZÆ.** Black.

Liquorice Root, in coarse powder, 1; cold Distilled Water, 5: macerate the root in half of the water for twelve hours, strain and press; again macerate the pressed marc with the remainder of the water for six hours, strain and press; mix the strained liquors; heat to 212° F., strain through flannel, and evaporate over a water bath to a pill consistence.

It is properly ordered to be prepared from the dried root, for when made from the fresh root it cannot be strained bright, and is liable to fermentation.

*Dose.*—½ to 1 drm.

(U.S. fluid extract, with Glycerine; Austr. Belg. Fr. (Ext. Réglisse) and Ger. (Ext. Liquiritiæ), from root with cold water; Belg. Dan. Fr. and Russ. also from crude extract.)

Contained in Confect. Sennæ, Decoctum Aloes Co., Mist. Sennæ Co., Tinct. Aloes, Trochisci Opii.

**EXTRACTUM GLYCYRRHIZÆ LIQUIDUM.**

Process the same as for Extractum Glycyrrhizæ, except that the strained liquid is to be evaporated until, when cold, its sp. g. is 1·160, then add one-eighth of its volume of Rectified Spirit, let it stand for twelve hours, and filter.

2 fluid ounces of this = 1 oz. of solid extract.

*Dose.*—1 drm.

(U.S. Liquorice Root percolated with a mixture of Alcohol, Glycerine, and Water.)

**PULVIS GLYCYRRHIZÆ COMPOSITUS.***

Senna, in fine powder, Liquorice Root, in fine powder, of each 2 ozs.; Refined Sugar, in powder, 6 ozs.

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* This preparation was put into the British Pharmacopœia because the German one was much prescribed; but in consequence of the formula being altered, it is

Not Official.

Pulvis Liquiritiæ Compositus. *Syn.* Pulvis Pectoralis Kurellæ, Ger. and Russ.—Powdered Senna, Powdered Liquorice, of each 2; Powdered Fennel, Sulphur, of each, 1; White Sugar, 6: mix.

*Dose.*—A teaspoonful or more for women, less in proportion for children, as a mild aperient.

Elixir e Succo Glycyrrhizæ, *seu* Elixir Pectorale, Ger. and Russ.— Extract of Liquorice, 1; Fennel Water, 3; ♆ Anisated Liquid Ammonia, 1 (all by weight): mix.

♆ Oil of Anise, 1; Rectified Spirit, 24; Liquid Ammonia, 5 (all by weight): mix.

Not Official.

## GOA POWDER.

Goa powder was brought into notice in this country by Sir Joseph Fayrer, who had used it in India in certain skin diseases. It can be made into a soft paste with vinegar, or made into an ointment with lard.

*See* ARAROBA, page 53.

## GOSSYPIUM.

### COTTON WOOL.

The hairs of the seeds of various species of *Gossypium* carded.

Used to shield burns and scalds from contact of air.

Used in the preparation of Pyroxylin.

Cotton wool is medicated with Carbolic Acid, Salicylic Acid, Eucalyptol, Thymol, Arnica, Glycerine, Perchloride of Iron, Iodine, and with Iodoform.

Dr. Von Brun's wound-dressing cotton is cotton wool freed from grease, and consequently more absorbent.

Professor Tyndall has introduced cotton wool as a filter in respirators.

Not Official.

## GOSSYPII RADICIS TINCTURA.

Dried bark of the root of the cotton plant, 1; Proof Spirit, 4: digest for seven days.

*Dose.*—1 drm. three times a day as an emmenagogue and parturient.

## GRANATI RADICIS CORTEX.

### POMEGRANATE ROOT BARK.

The bark of the root of *Punica Granatum* dried; chiefly imported dried from the south of Europe.

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incumbent on the chemist to keep both formulas, and he may then remain in doubt which the prescriber means, unless P.B. or Ger. is added to his recipe. All this would have been unnecessary had the formula been copied verbatim, as is done in the Russian Pharmacopœia.

### *Medicinal Properties.*

Astringent and anthelmintic. It is considered more effective than turpentine in expelling tape-worm, and is less likely to cause nausea. Both in a green and dry state it is found equally effective in India. The dried is imported.

(In all the Pharmacopœias; Fr. Grenadier.)

**Incompatibles.**—Alkalies, Lime Water, Metallic Salts, Gelatine.

## Preparation.

**DECOCTUM GRANATI RADICIS.**

Bark of Pomegranate Root, sliced, 1; Distilled Water, 20: boil to 10, and strain. =(1 in 10).

*Dose.*—1 to 2 ozs.

(Belg. 1 and 6, boil to 4; Fr. Apozème, 1 and 12½, boil to 9; not in others.)

Not Official.

An excellent remedy for tape-worm is as follows:—

Bruised Root-bark of Pomegranate, 2 ozs.; Boiling Water, 24 ozs.: macerate for 24 hours, and then boil till reduced to 18 ozs. A third part early in the morning, a third part again in half an hour, and the remainder in another half-hour. A dose of Castor Oil should have been taken the previous morning, and solid food abstained from on that day. This rarely fails to bring away the entire worm in two hours, and the head at the thinnest end should be diligently sought for.

Tannate of Pelletierin:—Prepared from the Pomegranate Bark has been used abroad as a remedy for tape-worm, it has been given in doses of 50 centigrams followed by Castor Oil. (*Practitioner*, February, 1880, p. 134.) Should not be given to young children.

Not Official.

## GRINDELIA ROBUSTA.

The leaves and flowering tops, from California.

Has been recommended in asthma and hay fever.

A Fluid Extract can be made with Rectified Spirit of a strength 1 in 1.

*Dose.*—10 to 20 mins. every half-hour until relief is obtained. The Solid Extract may be given in doses of 3 grains three times a day.

Mr. E. M. Holmes states that the drug as imported into this country is not *G. Robusta*, but *G. Squarrosa*, but that it is quite equal to that species in the amount of resin it contains, and indeed appears to be one of the richest in medicinal properties of the whole genus (*Pharm. Journal*, April 6th, 1878).

# GUAIACI LIGNUM.

GUAIACUM WOOD.

The wood of *Guaiacum officinale* imported from St. Domingo and Jamaica, and reduced by a turning lathe to the form of a coarse powder or small chips.

*Test.*—Nitric Acid applied to the dark or central wood produces a bluish-green colour: this part is considered to be the most active; it yields about 26 per cent. of resin.

(In all the Pharmacopoeias, except Austr.)

Not often prescribed alone.

Contained in Decoctum Sarsæ Compositum.

## GUAIACI RESINA.

### GUAIACUM RESIN.

The resin obtained from the stem of *Guaiacum officinale* by natural exudation, by incision, or by heat.

In large masses or in tears of brownish or greenish-brown colour; fractured surface resinous, translucent at the edges.

Solubility: it is soluble in Alcohol, Ether, Chloroform, and Alkaline solutions.

*Test.*—A solution in Rectified Spirit strikes a clear blue colour when applied to the inner surface of a paring of raw potato; or when paper moistened with the solution is exposed to the fumes of Nitric Acid it becomes blue.

### *Medicinal Properties.*

A stimulant diaphoretic and alterative. It is employed in chronic forms of rheumatism accompanied by great debility, in which the symptoms are relieved by warmth.

Generally prescribed in composition with other medicines.

(In all the Pharmacopoeias.)

*Dose.*—10 to 30 grs. three or four times a day until it causes hot sweating, with or without purging.

Contained in Pilula Hydrargyri Subchloridi Composita.

INCOMPATIBLES.—Mineral Acids, Spirit of Nitrous Ether.

### Preparations.

**MISTURA GUAIACI.**

Guaiacum Resin, in powder, 2; Sugar, 2; Gum Acacia powder, 1; Cinnamon Water, 80: triturate, adding the Cinnamon Water gradually. =(1 in 40).

*Dose.*—½ to 2 ozs.

(Not in other Pharmacopoeias.)

NOTE.—Gum Acacia does not suspend the Guaiacum well. It falls, and forms a compact sediment, which is difficult to disturb by shaking. If one-fourth the quantity of Tragacanth is used instead, it answers well.

**TINCTURA GUAIACI AMMONIATA.** Black. Coats the side of the bottle.

Guaiacum Resin, in powder, 4; Aromatic Spirit of Ammonia, 20: macerate seven days, filter, and wash the filter with the Spirit to make up 20. =(1 in 5).

*Dose.*—½ to 1 drm., with 1 drm. of mucilage or yolk of egg, to form an emulsion.

(U.S., similar to Brit.; Belg. 1 in 8; Dan. Ger. and Russ. 3 in 5 of Aqua Ammoniæ (sp. g. ·960) and 10 of Spirit, by weight; Fr. gives Ger. formula; not in others.)

Not Official.

**Tinctura Guaiaci.**—Guaiacum Resin, 1; Rectified Spirit, 5: digest fourteen days.

(Austr. Belg. Dan. Fr. Ger. and Russ. 1 and 5 by weight.)

**Haustus Guaiaci Compositus.**—Ammoniated Tincture of Guaiacum, 1 drm.; Mucilage, 2 drms.; Camphor Water to 1 oz.—*Middlesex Hospital.*

Not Official.

## GUARANA.

The seeds of *Paullinia sorbilis* dried in the sun, and then roasted and reduced to a fine powder; this is moistened with a little water, exposed to the night dew, and when got into a hard paste is rolled into cylinders; these are further dried in the sun or in the chimneys of the huts. It is exported from Brazil.

True Guarana is very hard, heavy, and, when powdered, is reddish-grey, whilst the sophisticated is much lighter in colour; it contains a substance identical with Caffeine.

### *Medicinal Properties.*

It is used chiefly for curing sick headache, when there is no determination of blood to the head, but is also useful in diarrhœa, dysentery, and as a tonic and stomachic in convalescence.

*Dose.*—30 grains, and repeated if necessary in 2 hours.

(Austr. Fr. Ger. and Russ.)

**Tinctura.**—Guarana, 1; Rectified Spirit, 4.

*Dose.*—1 to 2 drms. in water.

Not Official.

## GUMMI RUBRUM.

An exudation from the bark of *Eucalyptus rostrata*, imported from Australia. Solubility, of 100 parts 90 are dissolved by cold Water, the solution being clear. 27 parts of Isinglass precipitate all the astringent matter.

This gum adheres with great pertinacity to the mucous surfaces, and it is probably on this account that its astringency is more effective than that of Catechu, Kino, etc., although it contains less amount of astringent matter. Sir Ranald Martin introduced it into European practice.

### *Medicinal Properties.*

4 to 6 grs. given every 2 or 4 hours are useful in diarrhœa and dysentery: sometimes given with Extractum Belæ Liquidum.

**Decoctum.**—Red Gum, 1; Water, 40: boil ten minutes, and strain.

**Extractum Liquidum.**—Red Gum, 7; Water, 21: dissolve, strain, and add Rectified Spirit, 1.

*Dose.*—30 to 60 minims in a wineglassful of water.

An excellent styptic; injected into the nostril, at once stays bleeding of the nose.

A tablespoonful in a pint of water forms an astringent injection for the vagina or rectum.

**Lotio Ophthalmic Astringens.**—Liquid Extract of Red Gum, 1 drm.; Distilled Water, 6 ozs.

Useful in cases of bloodshot eyes where an astringent is required.

SUPPOSITORIA.—Powdered Red Gum, 5 grs.; Extract Nux Vomica, 1 gr.; Stearine, *q.s.*

Excellent for relaxed intestines and sphincter.

SYRUPUS.—Liquid Extract, 20; Sugar, 12: dissolve.

*Dose.*—30 to 60 minims.

TINCTURA.—Gum, 1; Rectified Spirit, 4: digest and strain. Mixes with water without becoming turbid.

If made with Proof Spirit it is very apt to become a solid jelly, as Tincture of Kino did, when it was so made.

*Dose.*—20 to 40 minims.

1 part of this with 6 or 8 of water, with Diluted Sulphuric Acid or with Syrup of Lemons for gargles.

TROCHISCI.—Lozenges for relaxed throat.

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## GUTTA PERCHA.

### GUTTA-PERCHA.

The concrete juice of *Isonandra gutta.*

In tough, flexible pieces, of a light brown or chocolate colour.

Soluble or nearly soluble in chloroform, yielding a more or less turbid solution.

### Preparation.

**LIQUOR GUTTA-PERCHA.**

Gutta-percha, in thin slices, 1 oz.; Chloroform, 8 fl. ozs.; Carbonate of Lead, in fine powder, 1 oz. Add the Gutta-percha to 6 fluid ounces of the Chloroform in a stoppered bottle, and shake them together frequently until solution has been effected. Then add the Carbonate of Lead previously mixed with the remainder of the Chloroform, and having several times shaken the whole together, set the mixture aside, and let it remain at rest until the insoluble matter has subsided. Lastly, decant the clear liquid, and keep it in a well-stopped bottle.

Used only in the preparation of Charta Sinapis.

(U.S.)

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Not Official.

## GYNOCARDIÆ OLEUM.

### CHAULMUGRA OIL.

Obtained from the seeds of *Gynocardia odorata*, a native of the forests of the Malayan Peninsula and Eastern India, as far north as Assam, extending thence along the base of the Himalayas as far west as Sikkim. The oil has been long known and used in India; it is solid, of a light brown colour, with disagreeable taste and smell, and can be readily melted by a gentle heat.

It has been recommended in the treatment of leprosy and other skin diseases, chronic rheumatism and gout, and secondary syphilis. Dr. Murrell has obtained good results from its external as well as internal administration in phthisis. (*Brit. Med. Journal*, Nov. 27, 1880, p. 844.)

*Dose.*—5 to 15 minims; it is best to begin with a small dose, 2 to 3 minims three or four times a day, gradually increasing; should be given after meals in milk or emulsion with gum acacia.

An ointment can be made of a strength about 1 in 4 with vaseline or other basis.

GYNOCARDIC ACID.—Chaulmugra Oil contains about 12 per cent. (Moss) of an active principle, Gynocardic Acid, the dose of which is ½ grain in pill three times daily, gradually increasing to 2 grains. (*Brit. Med. Journal*, p. 999.)

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# HÆMATOXYLI LIGNUM.

## LOGWOOD.

The heart wood of *Hæmatoxylon Campechianum* sliced, imported from Campeachy in Central America, from Honduras and Jamaica. The cherry-red inner wood is the part used.

### *Medicinal Properties.*

The decoction is a mild astringent, without irritating properties, useful in atonic dyspepsia and ordinary chronic diarrhœa and dysentery, and in passive hemorrhages; also as an injection for leucorrhœa.

(U.S.; Fr. Bois de Campêche; Belg. Ger. and Russ. Lignum Campechianum; not in others.)

INCOMPATIBLES.—Mineral Acids, Metallic Salts, Lime Water, Tartar Emetic.

### Preparations.

**DECOCTUM HÆMATOXYLI.**

Logwood, in chips, 1 oz.; Cinnamon, in powder, 60 grs.; Distilled Water, 20 ozs.: boil the logwood in the water for ten minutes, adding the cinnamon towards the end, strain, and pour on the contents of the strainer sufficient water to make up 20 ozs. =(1 in 20).

Iron vessels should not be used.

*Dose.*—1 to 2 ozs.

(U.S. about 1 in 15 without Cinnamon; not in others.)

**EXTRACTUM HÆMATOXYLI.** Dark liver colour.

Logwood, in fine chips, 1; boiling Distilled Water, 10: infuse twenty-four hours, boil to 5, strain, and evaporate to dryness by a water bath, stirring with a wooden spatula. Iron vessels should not be used.

*Dose.*—10 to 30 grs.

(Same as Belg. Ger. Russ. and U.S.; not in others.)

### Not Official.

MISTURA HÆMATOXYLI.—Lime Water, 3 drms.; Decoction of Logwood to 1 oz. —*Consumption Hospital.*

MISTURA HÆMATOXYLI COMP.—Extract of Logwood, 10 grs.; Wine of Opium, 5 minims; Ipecacuanha Wine, 10 minims; Chalk Mixture to 1 oz. For a dose. —*Guy's Hospital.*

Mistura Hæmatoxyli Infantium.—Decoction of Logwood, 1 drm.; Tincture of Catechu, 5 minims; Diluted Nitric Acid, 1 minim; Syrup, 8 mins. Child's dose. —*St. Mary's Hospital.*

Not Official.

## HAMAMELIS VIRGINICA.

### WITCH HAZEL.

It has been used in passive hemorrhage.

Tinctura.—Bruised Bark, 2; Proof Spirit, 20: macerate seven days.

*Dose.*—2 to 10 minims in water for Menorrhagia.

Not Official.

## HELLEBORUS NIGER.

*Medicinal Properties.*

A hydragogue cathartic, emmenagogue. In large doses poisonous.

Tinctura.—Root, 1; Proof Spirit, 8. *Dose.*—½ to 1 drm.

Extractum.—Made with Proof Spirit. *Dose.*—3 to 5 grs.

## HEMIDESMI RADIX.

### HEMIDESMUS ROOT.

The root of *Hemidesmus Indicus* (Indian Sarsaparilla), dried; imported from India.

*Medicinal Properties.*

Diuretic. Useful as an alterative in some diseases of the kidneys.

It was brought to England by Dr. Ashburner about the year 1830, and was prescribed for skin diseases and indigestion, like Sarsaparilla, but it did not prove very satisfactory, and is now used chiefly as a flavouring agent.

(Not in other Pharmacopœias.)

### Preparation.

**SYRUPUS HEMIDESMI.** Intense brown.

Hemidesmus Root, bruised, 1; Refined Sugar, 7; boiling Distilled Water, 5: infuse four hours, strain, and add the Sugar; dissolve by a gentle heat. The product should weigh 10½ and measure 8. Sp. g. 1·335. =(1 in 8).

*Dose.*—1 to 4 drms.

(Not in other Pharmacopœias.)

## HIRUDO.

### THE LEECH.

*Sanguisuga medicinalis,* the Speckled Leech (English Leech), belly greenish-yellow, spotted with black. Fr. Sangsue médicinale.

*S. officinalis*, the Green Leech, belly olive-green, not spotted; imported chiefly from Hamburg. Also collected in large numbers in Spain, France, Italy, and Hungary.

Bleeding from leech bites is sometimes difficult to stop. The following remedies have been applied with advantage:—Matico Leaf, Solution of Perchloride of Iron, Nitrate of Silver Point, and saturated Solution of Alum.

## HORDEUM DECORTICATUM.

### PEARL BARLEY.

The husked seeds of *Hordeum distichon*, cultivated in Britain.

Fr. Orge Perlé.

### Preparation.

**DECOCTUM HORDEI.**

Pearl Barley, 1; wash the Barley with cold water, then add to the washed barley Distilled Water, 15; boil twenty minutes in a covered vessel and strain.

### *Medicinal Properties.*

Demulcent, used as a drink in the sick-room.

(U.S. 1 and 30, boil to 15; Belg. 1 and Water sufficient, boil to 30; Fr. Tisane d'Orge; not in others.)

## HYDRARGYRUM.

### MERCURY.

### Hg, eq. 200.

A brilliantly lustrous silver-white metallic liquid, becoming solid at —39° F. Sp. g. 13·5. Volatilizes at a heat below that of visible redness, leaving no residue.

From China, Almaden in Spain, and Idria in Carniola; also from California, America. It is chiefly obtained from its sulphuret (native cinnabar) by distillation; but it is sometimes found in globules disseminated through the ore.

Mercury, as imported, is, after being squeezed through leather, nearly free from impurities. It was first employed medicinally by the Arabian physicians Avicenna and Rhazes, but they only ventured to use it externally against vermin and cutaneous diseases. We are indebted to that renowned empiric Paracelsus for its administration internally. *Pereira*, *Mat. Med.* 1849.

In this work Calomel is called the Subchloride of Mercury, and Corrosive Sublimate the Perchloride; and the British Pharmacopœia, 1867, has adopted these terms.

(In all the Pharmacopœias.)

*Test.*—Entirely volatilized by heat, leaving no residue.

### *Medicinal Properties.*

Mercury as a metal is seldom given alone. In a state of minute subdivision with Chalk, however, it has the effect of increasing the various secretions, its influence upon the salivary glands being the ordinary index of the amount of its action. It is cholagogue and purgative, and powerfully affects the mucous membranes of the intestinal canal. It causes the absorption and prevents the formation of morbid fluids, and is itself absorbed in all the tissues of the body.

It is used in congestion of the liver, kidneys, &c., in acute and chronic inflammation, and as a depletive in fevers. Of great use in syphilis, though sometimes followed by serious and even fatal consequences.

As an alterative, it is a safe and efficient medicine.

Externally, as a topical stimulant to indurated and chronically inflamed parts, and sometimes for introducing the metal into the system.

### Preparations.

**EMPLASTRUM HYDRARGYRI.** Blue.

Mercury, 3 ozs. (by weight): Olive Oil, 1 drm.; Sublimed Sulphur, 8 grs.; Lead Plaster, 6 ozs.: heat the oil, add the sulphur to it gradually, stirring till they unite; add the mercury, and triturate till its globules disappear: then add to the mixture the lead plaster, previously liquefied, and mix the whole thoroughly. =(about 1 in 3).

(In all the Pharmacopœias. Austr. 1 in 5·4; Belg. and Ger. 1 in 5·25; Dan. and Russ. 1 in 5; Fr. 1 in 5·6; U.S. 1 in 3·66; the ingredients differ considerably.)

**EMPLASTRUM AMMONIACI CUM HYDRARGYRO.** Brownish lead colour.

Ammoniacum, 12 ozs.; Mercury, 3 ozs. (by weight); Olive Oil, 1 drm.; Sublimed Sulphur, 8 grs.: heat the oil, and add the sulphur to it gradually, stirring till they unite. With this mixture triturate the mercury until globules are no longer visible; and lastly, add the ammoniacum, previously liquefied by heat, mixing the whole carefully.

=(nearly 1 in 5).

Applied as a discutient to glandular swellings, syphilitic nodes, and in chronic synovitis.

(Same as U.S.; not in others.)

**LINIMENTUM HYDRARGYRI.** Should be a lead-coloured cream, but usually appears like curds and whey.

Ointment of Mercury, 1; Solution of Ammonia, 1; Liniment of Camphor, 1: melt the ointment in the liniment, gradually add the ammonia, and shake them together.

=(1 Ointment in 3, or 1 of Mercury in 6).

(Not in other Pharmacopœias.)

A stimulating Liniment, applied to indolent ulcers; placed with lint in the armpits, it is a sure mode of producing salivation.

**PILULA HYDRARGYRI.** Blue.

Mercury, 2 (by weight); Confection of Roses, 3; Liquorice Root in fine powder, 1: rub the mercury with the confection of roses until metallic globules are no longer visible, then add the liquorice, and mix the whole well together. =(1 in 3).

*Dose.*—3 to 8 grs. as an alterative, 10 grs. as a purgative.

(Same as Fr. and U.S.; Belg. Pilulæ Hydrargyricæ, 3 grs. contain 1 gr. of Mercury; not in others.)

**SUPPOSITORIA HYDRARGYRI.**

Ointment of Mercury, 60 grs.; Benzoated Lard, 20 grs.; White Wax, 20 grs.; Oil of Theobroma, 80 grs.: melt the last three together, then add the ointment of mercury, and stir till well mixed, and immediately pour into moulds, the capacity of 15 grs. each, dividing the mass into 12 equal parts.

Each suppository contains 5 grs. of Mercurial Ointment.

**UNGUENTUM HYDRARGYRI.** Lead colour.

Mercury, 16 (by weight); Prepared Lard, 16; Prepared Suet, 1: rub them together until metallic globules cease to be visible. =(nearly 1 in 2).

(Belg. Fr. and U.S. 1 in 2: Fr. has also Pommade Mercurielle Faible, 1 in 8: Austr. Ger. and Russ. Ung. Hydr. Ciner. 1 in 3; Dan. 1 in 5.)

**UNGUENTUM HYDRARGYRI COMPOSITUM.** Lead colour.

Ointment of Mercury, 6; Yellow Wax, 3; Olive Oil, 3; Camphor, 1½: melt the wax and add the oil, and when the mixture is nearly cold, add the camphor in powder and the ointment of mercury, and mix.

This is Scott's celebrated absorbent Ointment, the Soap Cerate being replaced by the Oil and Wax.

It is an admirable Ointment to apply to carbuncles and other indolent tumours.

Not Official.

UNGUENTUM HYDRARGYRI CUM AMMONIÆ MURIATE (Dupuytren).—Mercurial Ointment, 16; Muriate of Ammonia in fine powder, 1: mix.

Applied to chronic glandular enlargements.

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Not Official.

## HYDRARGYRI BROMIDUM.

HYDRARGYRI BROMIDUM.—Pessaries made containing ½ gr. each.

HYDRARGYRI BIBROMIDUM.—Pessaries made containing ⅛ gr. each, and an Ointment containing 4 grs. to 1 oz.

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## HYDRARGYRI IODIDUM RUBRUM.

RED IODIDE OF MERCURY.

$HgI_2$, eq. 454.

A crystalline powder of a vermilion colour.

Solubility: almost insoluble in Water; sparingly soluble in Alcohol.

but freely in Ether, or in the aqueous solution of Iodide of Potassium.

*Test.*—It sublimes entirely at a heat below redness. When heated gently it becomes yellow, and resumes its scarlet colour on cooling.

### *Medicinal Properties.*

A powerful irritant poison, similar to the green iodide, only much more active. It is used internally in the same cases as corrosive sublimate; externally in scrofula and syphilis.

(U.S.; Austr. Ger. and Russ. Hydrargyrum Biiodatum Rubrum; Belg. Biioduretum Hydrargyri; Dan. Iodetum Hydrargyricum Rubrum; Fr. Deutoiodure de Mercure.)

*Dose.*—$\frac{1}{16}$ grain, increasing to $\frac{1}{4}$ grain.

Best given in a solution of Iodide of Potassium.

### Preparation.

**UNGUENTUM HYDRARGYRI IODIDI RUBRI.** Scarlet, but blackens by exposure to light.

Red Iodide of Mercury in very fine powder, 16 grs.; Simple Ointment, 1 oz.: mix. =(1 in 28).

A most effective application for bronchocele, and a good application for warts and syphilitic nodes.

(U.S. 1 in 31; Belg. 1 in 25; not in others.)

If applied to the eyelids, should be diluted to $\frac{1}{4}$ the strength, and even then it is a rubefacient to delicate skins.

### Not Official.

MISTURA HYDRARGYRI IODIDI.—Solution of Perchloride of Mercury, 1 drm.; Iodide of Potassium, 10 grs.; Cinnamon Water, 1 oz.—*Charing Cross.*

SOLUTIO.—Red Iodide, 3; Iodide of Potassium, 1; Water, 4: dissolve. 2 minims contain 1$\frac{1}{2}$ grs. of Red Iodide.

## HYDRARGYRI IODIDUM VIRIDE.

### GREEN IODIDE OF MERCURY.

### HgI, eq. 327.

A dull green powder, which darkens in colour upon exposure to light.

Mercury, 1 oz. (by weight); Iodine, 278 grs.; Rectified Spirit, a sufficiency; rub the iodine and mercury in a porcelain mortar, occasionally moistening the mixture with a few drops of the spirit to prevent violent action, and continue the trituration until metallic globules are no longer visible, and the whole assumes a green colour. The product thus obtained should be dried in a dark room, on filtering-paper, by simple exposure to the air, and preserved in an opaque bottle.

This should be freshly made, as Biniodide of Mercury forms after being kept some time, and becomes evident in minute red specks pervading the mass.

Insoluble in Water and Ether.

(U.S. Austr. Belg. and Ger. Hydrargyrum Iodatum flavum; Fr. Protoiodure de Mercure; Dan. Iodetum Hydrargyrosum flavum; Russ. Hydrargyrum Iodatum Viride.)

*Test.*—Entirely volatilized at a red heat. When shaken in a tube with Ether, nothing is dissolved. Is not acted upon by Aniline at a boiling heat, but if Biniodide be present, a magenta colour is produced.

### *Medicinal Properties.*

An irritant poison, similar to calomel in action. In small repeated doses it acts upon the lymphatic and glandular systems, and sometimes causes salivation. Employed as an ointment (1 part to 8 of Lard) for scrofulous and venereal eruptions, and chronic skin diseases.

*Dose.*—1 to 3 grs., and for children ⅓ to ½ grain.

### Not Official.

Pilula Hydrargyri Iodidi.—Green Iodide of Mercury, ½ gr.; Opium, ¼ gr.; Extract of Gentian, 2 grs. in 1 pill.—*British Skin.*

Unguentum.—Green Iodide of Mercury, 10 grs.; Sulphate of Atropine, 1 gr.; Lard, ½ oz.

This ointment is most useful in softening and reducing indurated Fascia of the fingers, which causes them to close upon the hand.

## HYDRARGYRI NITRATIS LIQUOR ACIDUS.

### ACID SOLUTION OF NITRATE OF MERCURY.

Nitrate of Mercury, Hg $2NO_3$, eq. 324; in solution in Nitric Acid.

A colourless and strongly acid solution.

Mercury, 4 (by weight); Nitric Acid, 5; Distilled Water, 1½: mix the nitric acid with the water in a flask, and dissolve the mercury in the mixture without the application of heat. Boil gently for fifteen minutes, cool, and preserve the solution in a stoppered bottle.

*Test.*—Sp. g. 2·246. Does not give any precipitate when a little of it is dropped into Hydrochloric Acid, diluted with twice its volume of water.

(U.S. sp. g. 2·165: Ger. and Russ. Liquor Hydrargyri Nitrici Oxydulati, 10 per cent. of Nitrate; Belg. Nitras Acidus Hydrargyri liquidus; Dan. Solutio Nitratis Hydrargyrosi; Fr. Nitrate Acide de Deutoxide de Mercure; not in others.)

### *Medicinal Properties.*

Caustic. Applied to syphilitic warts, ulcers, tubercles, &c. Used by Recamier in cancerous diseases. As a gargle, 1 or 2 minims to 1 oz. water. As an injection in gonorrhœa, 1 minim to 2 ozs. water.

### Preparation.

**UNGUENTUM HYDRARGYRI NITRATIS.** Lemon colour. *Syn.* Unguentum Citrinum.

Mercury, 4 (by weight); Nitric Acid, 12; Prepared Lard, 15; Olive

Oil, 32: dissolve the mercury in the nitric acid with the aid of a gentle heat; melt the lard in the oil by a steam or water bath in a porcelain vessel capable of holding six times the quantity, and while the mixture is hot add the solution of mercury, also hot, mixing them thoroughly. If the mixture does not froth up, increase the heat till this occurs and stir till cold. (The heat required for this is 170° to 180° F. U.S. 200° F.) =(about 1 in 15½).

Applied in chronic diseases of the skin as a stimulant and alterative; very efficacious in porrigo; in ophthalmic diseases, diluted with 1 or 2 parts or more of spermaceti ointment, and applied by means of a camel's-hair pencil to the eyelids.

We are chiefly indebted to Dr. Duncan for the improved formula which, with some modification, is adopted by the British Pharmacopœia, so that we have now an ointment that remains soft, and retains its beautiful lemon colour for a long time. This Ointment, however, on being diluted with lard, soon acquires a leaden colour; it changes less with Spermaceti Ointment, and least of all when diluted with Vaseline.

Belg. Mercury, 69; Nitric Acid (36°), 103; Lard, 414; Olive Oil, 414.
Dan. Mercury, 1; Nitric Acid (s. g. 1·48—1·5), 2; Lard, 3; Olive Oil, 9.
Fr. Mercury, 4; Nitric Acid (s. g. 1·42), 8; Lard, 40; Olive Oil, 40.
U.S. Mercury, 3; Nitric Acid (s. g. 1·42), 7; Lard, 33.

Not Official.

## VASELIN. HYDRARGYRI NITRATIS.

The Author has prepared some Citrine Ointment, using the same proportions of Mercury and acid as ordered in the Pharmacopœia, but in the place of the Lard and Olive Oil he has used White Vaseline. The acid and Mercury are put into a flask, the Vaseline heated in a water bath to 180° F.; if the Mercury is not all dissolved it is held in the bath till it is; it is then poured into the Vaseline, and stirred together till cold. It makes a nice ointment and keeps well; it may be diluted to any extent with White Vaseline, without impairing in the least the beautiful lemon colour it possesses. Yellow Vaseline may be used to dilute it, but not to prepare it.

Incompatibles.—Camphor and all reducing agents, as lard, etc.

Not Official.

## HYDRARGYRI OLEAS.

### OLEATE OF MERCURY.

Made by dissolving recently precipitated and well-dried Yellow Oxide of Mercury in Oleic Acid. This preparation was introduced by Prof. Marshall in 1872, and is made of three different strengths, containing respectively 5 per cent., 10 per cent., and 20 per cent. of Oxide of Mercury.

Oleate of Mercury and Morphia is made by dissolving 1 grain of Morphia Alkaloid in each drachm of the Oleate of Mercury.

## HYDRARGYRI OXIDUM FLAVUM.

YELLOW OXIDE OF MERCURY.

$HgO$, eq. 216.

Take of Perchloride of Mercury, 4 ozs.; Solution of Soda, 40 ozs.; Distilled Water, a sufficiency.

Dissolve the Perchloride of Mercury in 80 ounces of Distilled Water, aiding the solution by the application of heat, and add this to the Solution of Soda. Stir them together; allow the yellow precipitate to subside; remove the supernatant liquor by decantation; thoroughly wash the precipitated oxide on a calico filter with distilled water; and finally dry it by the heat of a water bath.

*Tests.*—A yellow powder readily dissolved by Hydrochloric Acid, yielding a solution which, with solution of Ammonia, gives a white precipitate. It is entirely volatilized when heated to incipient redness, being resolved into oxygen gas and the vapour of mercury.

1 gr. to 60 grs. of spermaceti ointment is the proper strength for the eyelids.

(Austr. Hydrargyrum oxydatum flavum; Ger. and Russ. Hydrargyrum oxydatum viâ humidâ paratum; U.S. Hyd. oxid. flav.)

Not Official.

UNG. HYD. OX. FLAV.—Yellow Oxide, 10; Lard, 56; Yellow Wax, 14; U.S. =(1 in 8).

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## HYDRARGYRI OXIDUM RUBRUM.

RED OXIDE OF MERCURY.

*Syn.* HYDRARGYRI NITRICO-OXIDUM, Lond.

$HgO$, eq. 216.

An orange-red powder.

Solubility: insoluble in Water; readily soluble in Hydrochloric Acid.

*Test.*—Entirely volatilized at a red heat, being at the same time decomposed into mercury and oxygen. If this be done in a test-tube, no orange vapours are perceived—indicating absence of nitrate.

### *Medicinal Properties.*

A powerful irritant. Internally, it excites vomiting and purging; however, it is rarely thus used. Chiefly employed as an escharotic, either in powder or ointment.

*Dose.*—¼ to 1 gr. in pill, in combination with Opium.

(Same as U.S.; Belg. Dan. Ger. and Russ. Hydrargyrum Oxydatum Rubrum Fr. Oxide Rouge de Mercure; not in Austr.)

### Preparation.

**UNGUENTUM HYDRARGYRI OXIDI RUBRI.** Red.

Red Oxide of Mercury in very fine powder, 62 grs.; Yellow Wax, $\frac{1}{4}$ oz.; Oil of Almonds, $\frac{3}{4}$ oz.: melt the Wax, add the Oil, and when nearly cold add the oxide and mix. =(1 in 8).

(Belg. 1 in 50; Dan. 1 in 20; Fr. 1 in 16; Ger. 1 in 10; Russ. with precipitated oxide 1 in 50; U.S. 1 in 8; not in Austr.)

In order to make this ointment perfectly smooth, the oxide should be first well rubbed with a little of the oil, the remainder added gradually.

Red oxide with both lard and simple cerate soon gets blue by keeping; with spermaceti ointment, however, it keeps its colour for months.

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## HYDRARGYRI PERCHLORIDUM.

### PERCHLORIDE OF MERCURY.

$HgCl_2$, eq. 271.

*Syn.* Hydrargyrum Corrosivum Sublimatum, Brit. 1864; Hydrargyri Bichloridum, Lond.; Sublimatus Corrosivus, Edin.; Sublimatum Corrosivum, Dub.; Corrosive Sublimate.

In heavy colourless masses of prismatic crystals.

Solubility: 1 in 19 of Water; 1 in 5 of Rectified Spirit; 1 in 6 of Ether.

*Test.*—Entirely soluble in Ether. When heated, it sublimes without decomposition, or leaving any residue. Its aqueous solution gives a yellow precipitate with Caustic Potash, and a white precipitate with Ammonia.

### *Medicinal Properties.*

A powerful irritant, given in very small doses in syphilitic affections. Externally as a lotion or ointment in chronic skin diseases, as an injection for chronic mucous discharges, and as a gargle for ulcerated sore throat.

*Is a powerful hepatic, but a feeble intestinal stimulant.*

*When Calomel and Perchloride of Mercury are given together, both the liver and intestinal glands are stimulated.—Dr. Rutherford.*

*Dose.*—$\frac{1}{16}$ to $\frac{1}{8}$ gr.

(Austr. Ger. and Russ. Hydr. Bichloratum Corros.; Belg. Hydrarg. Sublimatum Corros.; Dan. Chloretum Hydr. Corros.; Fr. Deutochlorure de Mercure Sublimé; U.S. Hydr. Chloridum Corros.)

Incompatibles.—Alkalies and their Carbonates, Lime Water, Tartar Emetic, Nitrate of Silver, Acetate of Lead, Albumen, Iodide of Potassium, Soaps, Decoction of Bark.

Antidotes.—In case of poisoning by Corrosive Sublimate, if vomiting does not already exist, it must be excited by the use of emetics; both the yolk and white of egg mixed with water may be administered in large quantity; wheaten flour with milk has also been recommended.

### Preparation.

**LIQUOR HYDRARGYRI PERCHLORIDI.** Colourless.

Corrosive Sublimate, 10 grs.; Chloride of Ammonium, 10 grs.; Distilled Water, 20 ozs.: dissolve. Each fluid drachm contains $\frac{1}{16}$ grain. =(1 in 960).

*Dose.*—30 to 120 minims.

(Same as Lond.; Belg. and Fr. (Liqueur de Van Swieten) 1 in 1000; not in others.)

### LOTIO HYDRARGYRI FLAVA.

Corrosive Sublimate, 18 grs.; Lime Water, 10 ozs.: mix. =(1 in 266).

(Aq. Phagedænica Belg. and Dan. 1 in 250; Ger. and Russ. 1 in 300; Fr. 1 in 325; not in Austr. and U.S.)

### Not Official.

**Collyrium Hydrargyri.**—Corrosive Sublimate, 1 gr.; Water, 6 to 8 ozs.: mix.

**Gargarisma Hydrargyri.**—Corrosive Sublimate, 4 grs.; Hydrochloric Acid, 8 minims; Water, 10 ozs.

**Unguentum Hydrargyri Perchloridi.**—Corrosive Sublimate, 2 grs.; Lard, 1 oz.: mix. For Porrigo.—*Charing Cross Hospital.*

Liégeois' solution for subcutaneous injection is 1 gr. to 1 oz. Distilled Water: $\frac{1}{10}$th part of this may be injected, in divided portions, in the course of one day.

## HYDRARGYRI SUBCHLORIDUM.

### SUBCHLORIDE OF MERCURY.

*Syn.* Calomelas, 1864, Edin. Dub.; Hydrargyri Chloridum, Lond.; Calomel.

HgCl, eq. 235·5.

A dull white, heavy, and nearly tasteless powder. It is, however, liable to become fawn-coloured by the action of light, unless it has been sublimed into steam.

Insoluble in Water, Rectified Spirit, or Ether.

*Test.*—Digested with Solution of Potash it becomes black. Entirely volatilized by a sufficient heat—indicating absence of impurities. Warm Ether, which has been shaken with it in a bottle, leaves on evaporation no residue—indicating absence of Corrosive Sublimate.

### *Medicinal Properties.*

Alterative, *cholagogue? purgative, and antiphlogistic.

*Calomel stimulates the intestinal glands, but not the liver.—Dr. Rutherford.*

The author is informed, however, by good observers who are in large practice that Calomel does unload the liver, affords relief in biliary affections, and causes light-coloured motions to become a healthy brown colour. It therefore remains for the physiologist to explain its mode of action.

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* The Edinburgh Committee of the British Medical Association determined that neither Mercury, nor Podophyllin, nor Taraxacum, in whatever manner, dose, or form it may be administered, has the slightest influence in increasing the flow of bile from the liver; therefore not cholagogue.

As an alterative it is used in syphilitic affections, chronic skin diseases, and scrofula in adults.

Useful in chronic hepatitis and jaundice.

As a purgative in bilious headache, hepatic dropsy, melæna, inflammation of the brain, and apoplexy.

As an antiphlogistic, 2 grs. combined with ¼ gr. opium, every four hours in inflammation of the serous membranes; *e.g.* iritis, pleurisy, and peritonitis.

For children, the absence of taste renders it convenient.

Its *local uses* are numerous, as in snuff, or as a gargle in venereal sore throat, as an injection with or without lime water, in blennorrhœa, and in fumigation; for this latter purpose a spirit lamp under a metal cup containing calomel, is placed under a cane-seated chair on which the patient is seated, his body being covered with a blanket; an apparatus contrived by Mr. Lee is still better. In a wide range of skin affections, it is invaluable as an ointment.

Should not be applied to the eye when a patient is taking Iodide of Potassium, for it will cause severe inflammation.—*Medical Press*, Oct. 6, 1880.

*Dose.*—As an alterative, ½ to 1 gr. three times a day; as a purgative, 2 to 8 grs.

(U.S. Hydrargyri Chloridum Mite; Belg. Hydrargyrum Dulce and Fr. Protochlorure de Mercure; both have 3 kinds, par sublimation, à la vapeur, par précipitation; Dan. Chloretum Hydrargyrosum (precipitatum et sublimatum); Austr. Ger. and Russ. Hydrargyrum Chloratum Mite, both the levigated and that sublimed into steam.)

The best form for making Calomel into pills is as follows:—2 of Calomel, 1 of soft Manna, 1 of compound Tragacanth powder. When made with mucilage they get very hard by keeping, and if made with conserve are apt to become moist.

INCOMPATIBLES.—Iodide of Potassium, Nitro-Hydrochloric Acid, Hydrocyanic Acid. Solutions of Lime, Potash, or Soda.

## Preparations.

**LOTIO HYDRARGYRI NIGRA.**

Calomel, 3 grs.; Lime Water, 1 oz.: mix.

(Dan. Aq. Mercurialis Nigra, 1 in 250; Ger. and Russ. Aq. Phagedænica, 1 and 60; not in others.)

**PILULA HYDRARGYRI SUBCHLORIDI COMPOSITA.** Bright orange.

Calomel, 1; Sulphurated Antimony, 1; Guaiacum Resin in powder, 2; Castor Oil, 1: mix. =(1 in 5).

*Dose.*—5 to 10 grs. as an alterative.

(Fr. gives Brit. Formula; Belg. Pil. Alterans Plummeri, 1 in 3; U.S. Pil. Antimonii Comp. 1 in 6; not in others.)

**UNGUENTUM HYDRARGYRI SUBCHLORIDI.** Cream colour. Gets slightly rancid by keeping.

Calomel, 80 grains; prepared Lard, 1 oz.: mix. =(about 1 in 6½).

(Not in others.)

### Not Official.

PILULA HYDRARGYRI SUBCHLORIDI C. COLOC.—Calomel, 1 gr.; Comp. Colocynth Pill, 3½ grs.; Ipecacuanha, ½ gr.; in two pills.—*Middlesex Hospital.*

Pilula Hydrargyri Subchloridi c. Jalapâ.—Calomel, 1 gr.; Jalap, 4 grs.; Treacle, *q. s.*: in one pill.—*St. Bartholomew's Hospital.*

Pilula Hydrargyri Subchloridi c. Scammoniâ.—Calomel, 1 gr.; Scammony, 3 grs.; Treacle, *q. s.*; in one pill.—*St. Bartholomew's Hospital.*

## HYDRARGYRI SULPHAS.

$HgSO_4$, eq. 296.

A white, heavy, crystalline powder, which is decomposed by water, forming a yellow oxysulphate called Turpeth Mineral.

Used to prepare Calomel and Corrosive Sublimate.

## HYDRARGYRUM AMMONIATUM.

AMMONIATED MERCURY.

*Syn.* White Precipitate of Mercury.

$NH_2HgCl$, eq. 251·5.

An opaque white powder.

**Solubility:** soluble in Hydrochloric Acid. Insoluble in Water, Alcohol, and Ether.

*Test.*—Entirely volatilized at a heat below redness. Digested with Caustic Potash, it evolves ammonia.

(U.S. Hydrarg. Ammon.; Aust. Hydrarg. bichloratum ammoniatum; Dan. Chloretum Amido-hydrargyricum; Belg. Ger. Hydrargyrum Præcipitatum Album; Russ. Hydrarg. Amidato-bichloratum; Ph. Lond. 1788, Calx Hydrargyri Alba.)

### *Medicinal Properties.*

Never given internally. Used in the form of ointment as a stimulating application for chronic skin diseases, as porrigo, impetigo, herpes, and sometimes scabies. The ointment is used for pediculi, but the powder can be used alone or mixed with rose water, and the unpleasantness of greasing the linen avoided.

### Preparation.

**UNGUENTUM HYDRARGYRI AMMONIATI.** Cream colour.

Ammoniated Mercury, 62 grs.; Simple Ointment, 1 oz.: mix. =(1 in 8).

(U.S. 1 and 12; Ger. and Russ. Ung. Hydr. Præcipitati Albi, 1 and 9; not in others.)

## HYDRARGYRUM CUM CRETA.

*Syn.* Grey Powder.

Mercury (by weight), 1; Prepared Chalk, 2:* triturate till the globules disappear. =(1 in 3).

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* Instead of the 2 of Chalk, 1½, with ½ of Sugar of Milk, is recommended in the *Ph. Journal*, June 24, 1876.

By heat, part passes off in vapour; what remains corresponds to chalk in its chemical characters.

Best given by itself, or with rhubarb or other powder, as when rubbed with hard extract to form a pill, the Mercury sometimes separates in globules.

*Dose.*—3 to 8 grs.

(Fr. gives Brit. formula; U.S. 3 and 5; not in others.)

INCOMPATIBLES.—Acids and Acidulous Salts.

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# HYOSCYAMI FOLIA.

## HYOSCYAMUS LEAVES.

The fresh leaves and small branches of the indigenous biennial plant *Hyoscyamus niger*, Henbane; collected when about two-thirds of its flowers are expanded. Also the leaves ONLY, carefully dried.

Its properties are completely extracted by Alcohol. The leaves yield by destructive distillation a very poisonous oil. The plant yields a crystalline alkaloid, which is best obtained from the seeds or from the root, the pure alkaloid and the sulphate, both in white crystals.

The biennial plant in the first year presents only a tuft of leaves; these die, and leave not a trace of the plant aboveground in the winter; they spring again in April, and produce a stem; the leaves and the branches of this are used in medicine.

### *Medicinal Properties.*

Narcotic. Similar in action to Belladonna and Stramonium, but milder. Used as a sedative in excited states of the nervous system when Opium, from its constipating properties, is not advisable. It is also employed to diminish pain and allay irritation of the bladder, and to prevent the griping of purgative medicines. The fresh leaves are sometimes used as a cataplasm, or as a fomentation to allay pain in ulcers and tumours, and in gouty and rheumatic swellings. The juice of the plant dilates the pupil of the eye.

(Austr. Leaves; Belg. Dan. Ger. Russ. and U.S. Leaves and Seeds; Fr. Jusquiame, Leaves and Seeds.)

INCOMPATIBLES.—Vegetable Acids, Nitrate of Silver, Acetate of Lead, Liquor Potassæ or Sodæ.

ANTIDOTES.—The stomach pump, emetics, external and internal stimulants, Lemon Juice.

According to the statement of some eminent writers, a large dose of Hyoscyamus may be taken with impunity.

### Preparations.

**EXTRACTUM HYOSCYAMI.** Black.

The expressed juice of the leaves and young branches of the fresh plant treated as directed in Extract of Belladonna, and evaporated to an extract at a temperature not exceeding 140° F.

100 lbs. produce 50 lbs. juice = 5 lbs. Extract.
100 lbs. leaves, dried, weigh 15½ lbs.
100 lbs. freshly picked leaves, when dried, yield only 11 lbs.

*Dose.*—3 to 6 grs.

(Austr. juice from fresh Leaves, freed from Albumen and evaporated; Belg. with clear juice of the herb evaporated and mixed with the powder of the same, so that the whole can be reduced to powder,—also an extract of the herb with fæculæ evaporated to dryness,—also alcoholic extracts from the herb and from the Seeds; Dan. made from Leaves with weak Spirit; Ger. made with Water and Spirit from fresh Leaves and Stalks; Russ. made from Leaves with Water and Spirit; Fr. clarified juice from Leaves evaporated, also alcoholic extracts from dried Leaves and from the Seeds; U.S. nearly the same as Br.,—also an alcoholic extract from the powder of the Leaf, and a liquid extract from the same.)

**SUCCUS HYOSCYAMI.**

Freshly expressed juice, 3; Rectified Spirit, 1: mix and set aside seven days, then filter.

*Dose.*—½ to 1 drm.

**TINCTURA HYOSCYAMI.** Intense greenish-brown.

Hyoscyamus leaves, dried and bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, pack in a percolator, and when it has drained pour on the remaining spirit, and when it ceases to drop, press, and filter and add proof spirit to make up 8. =(1 in 8).

*Dose.*—15 to 60 minims; 4 drms. have been given in severe insomnolence.

(Fr. 1 in 5, also Ethereal, and Alcoolature with fresh Leaves and Spirit, equal weights, also Brit. Ph. formula; Belg. 1 in 5, and Ethereal, also fresh herb and Alcohol equal weights; Russ. 1 and 10; U.S. by percolation, 1 and 7; all by weight; not in others.)

### Not Official.

Hyoscyamus was unusually fine in 1878, and the Author prepared a Tincture of 6 lbs. of fresh leaves, gathered on the spot, from the stalk, and at once cut small and placed in a 200 oz. bottle with 2 lbs. weight of Rectified Spirit, and digested 7 days; the proportions are weaker than P. B., but the aroma is much superior, and the effect more calming.

The plants of the first year's growth being equally fine, he directed the roots of these to be dug up in the spring and dried. The following preparations have been made, and the root of Hyoscyamus promises to be as useful as the Belladonna root introduced by the Author in 1860.

CHLOROFORMUM HYOSCYAMI.—Hyoscyamus Root, in powder, 20 ozs.; Chloroform sufficient to percolate 20 ozs.

LINIMENT. HYOSCYAMI.—Hyoscyamus Root, in powder, 30 ozs.; Rectified Spirit, 20 ozs.: digest 4 days, and place in a percolator; add Spirit enough to percolate 30 ozs.

LINIMENT. HYOSCYAMI COMP.—Liniment. Hyoscyami, 7; Chloroform. Hyoscyami, 1: mix.

TINCT. RADIC. HYOSCYAMI.—Hyoscyamus Root, in powder, 5 ozs.; Proof Spirit, 40 ozs.: digest 7 days. Dose 20 to 60 mins.

Dr. Gee, of St. Bartholomew's Hospital, tried the effect of Tincture made from the fresh and dried leaves, from the seeds, and from the dried root; he found that made from the root the most active; he has also tried Hyoscyamine—$\frac{1}{16}$ of a grain injected subcutaneously never fails to produce in a strong man great giddiness, dryness of the mouth and throat, and acceleration of the pulse in a quarter of an hour.

The Compound Liniment, applied on piline as directed for Lin. Bellad. Comp., has been found most useful in relieving difficult cases of rheumatism.

HYOSCYAMINE, $C_{17} H_{23} NO_3$.—An Alkaloid obtained from the seeds of *Hyoscyamus Niger*, isomeric with Atropine but not regarded as identical with it. It crystallizes in silky needles. There are good reasons for believing that Daturine and Duboisine are identical with Hyoscyamine.

SULPHATE OF HYOSCYAMINE.—Occurs in minute crystals which are soluble in water.

Not Official.

## ICHTHYOCOLLA.

### ISINGLASS.

This well-known substance was in the early London Pharmacopœias, and called Ising-glass or Fish glue; it was used in medicine as a nutrient. It is still to be found in the Pharmacopœias of Austria, Belgium, Denmark, Germany, and Russia. It is used for fining Wine, for which purpose gelatine does not answer.

Isinglass Plaster, introduced by the celebrated surgeon Mr. Liston, is called by his name, and when made by Mrs. Puckeridge was a most useful plaster, enabling the surgeon to see how his wound was progressing without removing the plaster, and occupying so little room, that a supply could be carried in a card-case or purse, and at once applied to a cut or scratch the moment required.

The Author regrets to say that the plaster has got into other hands, and instead of adhering firmly as it used to do, it fails; he however finds that by washing off with warm water the should-be adhesive composition, and laying on the following, it answers perfectly:

Take of Isinglass, ½ oz.; soak it in 2 oz. of aqueous solution of Gum Ammoniacum (1 to 16), and afterwards liquefy it over a water bath and add by degrees ¼ oz. of Tinct. Ammoniacum, (1 to 16 of Proof Spirit), and whilst liquid spread it thinly on the membrane.

Liston's Plaster has lately improved.

Isinglass is used for Court Plaster and gold-beater's skin.

*Test.*—Isinglass is not soluble in cold water; Gelatine is. (Dr. Aquilla Smith.)

Isinglass 15 grs. to the oz. of Glycerine. Useful in some skin diseases.

Not Official.

## GELATINE.

Gelatine is prepared chiefly from selected pieces of Calves' Pelt, which are treated by high-pressure steam; the gelatine which is dissolved out is spread on thin plates and when dry is cut into shreds for sale.*

It is much used in Pharmacy; a formula for making suppositories and pessaries is given under Glycerine, page 158.

Soak 1 of Gelatine in 1 of Water; melt in a water bath with gentle heat; strain and add 5 of Glycerine, and pour the solution into a shallow dish; it forms, when set, the Hectograph plate; the note is written with Judson's violet dye, and placed face downwards on it, gently passed over with the fingers, and then taken off. The impression is left, and plain note paper applied and pressed upon, in succession, takes numerous facsimilies. Hot water and a sponge remove the impression when done with.

Gelatine dissolved in Glycerine is used for putting up microscopical specimens.

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* The Author is indebted to Mr. Gale for this information.

Not Official.

## IGNATIA AMARA.

**Extractum.**—Prepared by percolating Ignatia beans in fine powder, with Spirit, and evaporation.

Given in debility of the digestive organs.

*Dose*—⅙ to 1 gr. in a pill three times a day.

(U.S.)

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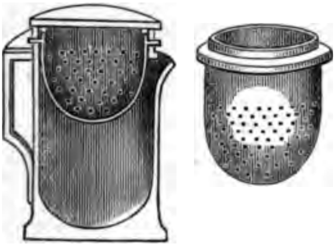
## INFUSA.

### INFUSIONS.

Infusions, though generally made with boiling water, are in some cases ordered to be made at a lower temperature, as Infusum Calumbæ, the starch of which would be dissolved by boiling water. The mucilage and vegetable albumen present are, however, dissolved by cold water, and these render the infusion liable to change.

The Infusion Pot, invented by the Author and placed in the Exhibition of 1851, answers well for Infusions if proper sizes are used for the quantities ordered, so that the ingredients are held by the perforated basin in the upper part of the fluid and *under the surface*. The impregnated fluid becoming of greater density falls to the bottom, thus exposing the ingredients constantly to the continued action of fresh unimpregnated fluid until the action ceases, and the soluble matter is most effectually extracted. *When hot infusions are made, boiling water should be first poured into the pot, to thoroughly warm it; this being thrown out, the ingredients are put into the colandar, and the requisite quantity of boiling water poured upon them. The new pots have the directions for use enamelled upon them.*

The annexed section of the Infusion Pot will show its construction:—



Concentrated Infusions are very largely used by general practitioners and some chemists; although very convenient and economical they have not the aroma of the freshly made infusion.

Infusions are very apt to change in hot weather, and several means have been proposed to preserve them. Small bottles filled to the brim with recently made infusion, and placed in a boiler with hay and water, are kept at the boiling-point for five minutes, then tied over with a bladder, or stoppered whilst hot. Infusions thus treated are preserved good for several weeks. Inf. Gentian. Co., Inf. Aurant. Co., so treated, kept good for three months. Infusion of Senna, which would change in twelve hours in hot weather, will keep for several days perfectly good if one grain of Nitre be dissolved in each ounce of the infusion.

The following are the Infusions of the British Pharmacopœia. The full formulas for these Infusions will be found under the names of the substances from which they are prepared.

It has been thought desirable, for the convenience of the dispenser, to add a table of the ingredients and time required.

Boiling Distilled Water is to be used, unless otherwise stated.

| | | | | | |
|---|---|---|---|---|---|
| INFUSUM ANTHEMIDIS | ½ oz. | Water 10 ozs. | Infuse ¼ | hour | and strain. |
| INF. AURANTII (peel cut small) | ½ oz. | 10 | ¼ | " | " |
| INF. AURANTII COMP. | | | | | |
| Bitter Orange Peel, cut small | ¼ oz. | 10 | ¼ | " | " |
| Fresh Lemon Peel, cut small | 60 grs. | | | | |
| Cloves (bruised) | 30 grs. | | | | |
| INF. BUCHU (leaves bruised) | ½ oz. | 10 | 1 | " | " |
| INF. CALUMBÆ (cut small) | ½ oz. | cold 10 | 1 | " | " |
| INF. CARYOPHYLLI (bruised) | ¼ oz. | 10 | ½ | " | " |
| INF. CASCARILLÆ (coarse powder) | 1 oz. | 10 | 1 | " | " |
| INF. CATECHU (coarse powder) | 160 grs. | 10 | ½ | " | " |
| Cinnamon (bruised) | 30 grs. | | | | |
| INF. CHIRATÆ (cut small) | ¼ oz. | 120° 10 | ½ | " | " |
| INF. CINCHONÆ FLAVÆ (coarse powder) | ½ oz. | 10 | 2 | " | " |
| INF. CUSPARIÆ (coarse powder) | ½ oz. | 120° 10 | 2 | " | " |
| INF. CUSSO (coarse powder) | ¼ oz. | 4 | ¼ | *hour,* | *not strained.* |
| INF. DIGITALIS (dried leaves) | 30 grs. | 10 | 1 | hour | and strain. |
| INF. DULCAMARÆ (bruised) | 1 oz. | 10 | 1 | " | " |
| INF. ERGOTÆ (coarse powder) | ¼ oz. | 10 | ½ | " | " |
| INF. GENTIANÆ COMP. | | | | | |
| Gentian Root (sliced) | 60 grs. | 10 | 1 | " | " |
| Bitter Orange Peel (cut small) | 60 grs. | | | | |
| Fresh Lemon Peel (cut small) | ¼ oz. | | | | |
| INF. KRAMERIÆ (bruised) | ½ oz. | 10 | 1 | " | " |
| INF. LINI . . . . . Linseed | 160 grs. | 10 | 4 | " | " |
| Fresh Liquorice Root (sliced) | 60 grs. | | | | |
| INF. LUPULI | ½ oz. | 10 | 2 | " | " |
| INF. MATICÆ (cut small) | ½ oz. | 10 | ½ | " | " |
| INF. QUASSIÆ (chips) | 60 grs. | cold 10 | ½ | " | " |
| INF. RHEI (sliced) | ¼ oz. | 10 | 1 | " | " |
| INF. ROSÆ ACIDUM (broken petals) | ¼ oz. | 10 | ½ | " | " |
| Dil. Sulph. Acid 1 drm. | | | | | |
| INF. SENEGÆ (bruised) | ½ oz. | 10 | 1 | " | " |
| INF. SENNÆ . . . . (Senna) | 1 oz. | 10 | 1 | " | " |
| Ginger (sliced) | 30 grs. | | | | |
| INF. SERPENTARIÆ (bruised) | ¼ oz. | 10 | 2 | " | " |
| INF. UVÆ URSI (bruised) | ½ oz. | 10 | 2 | " | " |
| INF. VALERIANÆ (bruised) | 120 grs. | 10 | 1 | " | " |

# IODUM.

## IODINE.

I, eq. 127.

A non-metallic element, obtained principally from the ashes of seaweeds, in the western islands of Scotland and Ireland; is also largely manufactured in France. Sublimed in laminar crystals of a dark colour and metallic lustre, and of peculiar odour.

Solubility: 1 in 7000 of Water; 1 in 12 of Rectified Spirit; 1 in 4 of Ether; sparingly in Glycerine; soluble in a solution of Iodide of Potassium.

*Test.*—Entirely soluble in Ether. It sublimes without leaving any residue, and the portion which first comes over does not include any slender colourless prisms, emitting a pungent odour (Cyanide of Iodine). 12·7 grains dissolved in 1 ounce of Water containing 15 grains of Iodide of Potassium require for complete decoloration 1000 grain-measures of the volumetric solution of Hyposulphite of Soda; *i.e.* to change the whole of the equivalent 12·7 grains of Iodine into colourless Iodide of Sodium and Tetrathionate of Soda.

### *Medicinal Properties.*

It acts specially as a stimulant to the entire lymphatic system, causing absorption, promoting elimination by the kidneys, acting as an antidote to certain blood poisons, organic and inorganic, as syphilis and lead poisoning. Also in chronic inflammation, to promote absorption and elimination in dropsies and chronic rheumatism. Most efficacious in glandular enlargements and morbid growths, as in bronchocele, scrofulous glands of the neck and abdomen, as an alterative in obstinate mucous discharges; caution, however, being used, as it may occasion wasting in healthy glands, such as the mammæ and testes. Externally, in chronic skin diseases, and over-enlarged and indurated parts and diseased joints, to cause absorption. A few drops of the tincture in half a pint of hot water may be inhaled in some forms of chronic bronchitis and phthisis. Best administered in the form of tincture, largely diluted with water. The skin coloured by iodine can be rendered colourless again by a saturated solution of Hyposulphite of Soda.

*Dose.*—Of free Iodine, ½ gr., gradually increasing.

(In all the Pharmacopœias.)

Contained in Pilula Ferri Iodidi and Syrupus Ferri Iodidi.

The Iodides of Cadmium, Iron, Mercury, Potassium, and Sulphur are official those of Arsenic and Zinc are not official.

INCOMPATIBLES.—Ammonia, Metallic Salts, Mineral Acids, Vegetable Alkaloids.

ANTIDOTES.—Emetics aided by Demulcent Drinks, Starch, Flour, etc., diffused in water; Hypodermic Injection of Morphia to relieve pain.

## Preparations.

**LINIMENTUM IODI.** Intense blood colour.

Iodine, 5; Iodide of Potassium, 2; Camphor, 1; Rectified Spirit, 40: dissolve. =(1 of Iodine in 9).

(Not in other Pharmacopœias.)

Proper strength to paint upon bursæ and enlarged glands.

**LIQUOR IODI.** Deep blood colour.

Iodine, 20 grs.; Iodide of Potassium, 30 grs.; Distilled Water, 1 oz. =(1 of Iodine in 24).

(Russ. Liquor Iodi cum Kalio Iodato, Iodine 1, Iodide of Potassium 2, Distilled Water 97; U.S. Liquor Iodinii Co. Iodine 1, Iodide of Potassium 2, Distilled Water 20; not in the others.)

**TINCTURA IODI.** Intense brown-red.

Iodine, ½; Iodide of Potassium, ¼; Rectified Spirit, 20: dissolve. =(1 of Iodine in 40).

*Dose.*—5 to 20 minims. Also an excellent application to the throat in diphtheria.

(U.S. (Tinct. Iodin. Co.) Iodine 1, Iodide of Potassium 2, Alcohol 25. The following without the Iodide of Potassium:—Austr. 1 and 16; Belg. 1 in 12·5; Fr. 1 and 12; Dan. Sol. Iodi Spirituosa, 1 in 20; Ger. and Russ. 1 and 10; U.S. 1 and 12·5. All by weight. Not in others.)

Hyposulphite of Soda decolorizes Solutions of Iodine.

**UNGUENTUM IODI.** Deep brown.

Iodine, 32 grs.; Iodide of Potassium, 32 grs.; Proof Spirit, 1 drm.: rub together, and add Prepared Lard, 2 ozs. =(1 of Iodine in 31).

(Belg. Iodine 1, Alcohol 1, Lard 23; Ung. Iodii Comp., Iodine 3, Iodide of Potassium 9, Lard 88; Fr. Pommade d'Iodure de Potassium Ioduré, Iodine 1, Iodide of Potassium 5, Benzoated Lard 40; U.S. Iodine 20, Iodide of Potassium 4, Water 6, Lard 480, mix; U.S. (Comp.) Iodine 15, Iodide of Potassium 30, Water 30, Lard 480, mix; not in the others.)

**VAPOR IODI.** INHALATION OF IODINE.

Tincture of Iodine, 1 drm.; Water, 1 oz.; mix in a suitable apparatus, and having applied a gentle heat, let the vapour that rises be inhaled.

(Not in other Pharmacopœias.)

### Not Official.

INHALATIO IODI C. CONIO.—½ drm. to 1 drm. of Succus Conii being added to the above Vapor Iodi.

GLYCERINUM IODI.—Iodide of Potassium, 1; Glycerine 2: dissolve, and add Iodine, 1; shake till dissolved. When diluted, is injected for Hydrocele with success.

GARGARISMA IODI (St. Thomas's Hospital).—Tincture of Iodine, 2 drms.; Water, 5 ozs.: mix. (In ulceration of the tonsils.) =(1 in 20).

LIQUOR AMMONIÆ IODIDI (Sir J. Y. Simpson).—Liq. Ammon. Fortiss., 2 ozs.; Iodine, 10 grs.; Iodide of Potassium, 20 grs.; Rectified Spirit, 1 oz.: dissolve.

LOTIO IODI COMP.—Iodine, 1 dr.; Iodide of Potassium, 4 scruples; Water to 1 oz. —*St. George's Hospital.*

LUGOL'S SOLUTION.—Iodine, 20 grs.; Iodide of Potassium, 30 grs.; Water 1 oz.: dissolve. Dose, 6 minims twice a day, gradually increasing the dose to 20 minims.

LUGOL'S CAUSTIC.—Iodine, 60 grs.; Iodide of Potassium, 60 grs.; Water, 2 drms.

MISTURA IODI COMP.—Tincture of Iodine, 8 minims; Iodide of Potassium, 5 grs.; Peppermint Water, 1 oz.—*Charing Cross.*

TINCTURA IODI DECOLORATA (Ger. and Russ.).—Iodine, 10; Hyposulphite of Soda, 10; Distilled Water, 10: dissolve and add Alcohol Ammonia, sp. g. 0·808 (10 per cent.), 16. Agitate, and then add Alcohol (sp. g. ·830—·834) 75; set aside three days and filter.

Not Official.

## IODOFORM.

A yellow crystalline substance, which occurs in minute scales, also in the form of powder. It has a peculiar odour.

Solubility: insoluble in Water, 1 in 8 of Ether, 1 in 14 of Chloroform, 1 in 110 of Rectified Spirit. It is also soluble in the fixed and volatile oils, and in Glycerine.

Used to relieve cancer and abate the progress of the disease; to relieve sciatica and neuralgia; also useful in chancres or syphilitic sores, the powder being applied, or an ointment (1 drm. to 1 oz. of Lard).

As an antiseptic, Iodoform in fine powder is used as a spray; gauze and cotton wool are prepared containing 5, 10, and 20 per cent. of Iodoform, for antiseptic dressings.

It is not recommended to be applied to inflamed tissues.

Balsam of Peru and Cumarin prepared from Tonka beans have been used to cover the smell of Iodoform.

*Dose.*—1 to 3 grains; the Iodoform should be finely powdered, and at least twenty times its weight of mucilage employed to make it miscible with water; or it may be given in the form of pills, made with extract and powder of Gentian.

(Belg. Ger. Russ. U.S; not in the others.)

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## IPECACUANHA.

### IPECACUANHA.

The dried root of *Cephaelis Ipecacuanha*, from Brazil. The active principle resides in the bark, the inner or woody part possessing scarcely any of its virtues.

Ipecacuanha contains an Alkaloid, *Emetine*, separable as a whitish amorphous powder; which assumes an intense and permanently yellow colour with solution of Chlorinated Lime and Acetic Acid.

This test applied to powder of Ipecacuanha will turn it yellow.

### *Medicinal Properties.*

Emetic in large doses. In small doses it becomes absorbed and acts upon the different mucous surfaces, especially of the respiratory organs, and is therefore expectorant. It is diaphoretic and laxative; also sedative to the vascular system. Given in agues, to prevent the paroxysm. Ipecacuanha has long since been relied on in the East for the cure of dysentery in the acute stage. When the evacuations are frequent and accompanied with mucus, 20 to 30 grains are given; and if the stomach rejects it, a little opium is given with it, or a mustard poultice applied to the stomach.

*Is a powerful hepatic stimulant, it increases slightly the secretion of intestinal mucus, but has no other apparent stimulant effect on the intestines.—Dr. Rutherford.*

Applied to the bites and stings of insects.

*Dose.*—In powder as an emetic, 15 to 30 grs.; as an expectorant, etc., ½ to 2 grs.

In all the Pharmacopœias.)

Prescribed in ¼ to 1 gr. doses as an auxiliary in alterative pills.

Contained in Pil. Conii Comp.

**Incompatibles.**—Salts of Lead, Mercury, Vegetable Acids, Astringent Infusions.

## Preparations.

**PILULA IPECACUANHÆ CUM SCILLA.** Brown.

Compound powder of Ipecacuanha, 3; Squill, in powder, 1; Ammoniacum, in powder, 1; Treacle, *q. s.*
=(3 Dover's Powder in 7, or 1 of opium in 23).

*Dose.*—5 to 10 grs.

(Not in other Pharmacopœias.)

**PULVIS IPECACUANHÆ COMPOSITUS.** Light fawn colour. *Syn.* Pulvis Ipecacuanhæ cum Opio; Pulvis Doveri.

Ipecacuanha, in powder, 1; Opium, in powder, 1; Sulphate of Potash, 8: mix. =(1 Opium, 1 Ipecac. in 10).

*Dose.*—5 to 10 grs.

(In all the Pharmacopœias, and is the well-known Dover's Powder; Austr. Pulv. Doveri, with Sugar instead of Sulphate of Potash; Dan. Pulv. Ipecac. Thebaicus; Ger. and Russ. Pulvis Ipecacuanhæ Opiatus; U.S. Pulv. Ipecac. Co.; all same strength as Brit.; Belg. and Fr. 1 *Extract* Opium, 1 Ipecac., in 11.)

The original Powder of Dr. Dover was prepared by fusing together 4 parts of Nitrate of Potash with 4 of Sulphate of Potash, and reducing the product to fine powder; to this was added 1 of Ipecacuanha, 1 of Opium, and 1 of Liquorice; the French Codex adopts this formula for Poudre de Dower, using, however, the powdered Extract of Opium instead of Opium itself, which nearly doubles the strength.

An admirable anodyne diaphoretic; it is also most useful in dysentery and diarrhœa; in the latter case it is sometimes combined with calomel.

3 or 4 grs. will relieve heartburn, probably by allaying irritability.

**TROCHISCI IPECACUANHÆ.** Buff colour.

$\frac{1}{4}$ gr. of Ipecacuanha in each lozenge.

*Dose.*—1 to 3 lozenges.

(Austr. and Ger. $\frac{1}{13}$ grain; Belg. and Dan. about $\frac{1}{4}$ grain; Fr. about $\frac{1}{7}$ grain; Russ. about $\frac{1}{5}$ grain; U.S. $\frac{1}{4}$ grain.)

**TROCHISCI IPECACUANHÆ ET MORPHIÆ.** Cream colour.

Ipecacuanha $\frac{1}{12}$ gr., Hydrochlorate of Morphia $\frac{1}{36}$ gr., in each lozenge.

*Dose.*—1 to 6 lozenges.

(U.S. Ipecac. $\frac{1}{12}$ gr., Sulphate of Morphia $\frac{1}{40}$ gr., in each.)

**VINUM IPECACUANHÆ.** Yellowish-brown.

Ipecacuanha, bruised, 1; Sherry, 20: macerate seven days, shaking occasionally, strain, and make up with Sherry to 20. =(1 in 20).

*Dose.*—As an expectorant, etc., 5 to 40 minims; as an emetic, 3 to 6 drms.

(Fr. gives Brit. formula; Belg. 1 in 16·6; Dan. Ger. and Russ. 1 and 10; U.S. 1 fluid Extract, and 15 Sherry; not in others.)

### Not Official.

Syrupus Ipecacuanhæ (Ger.).—Bruised Ipecacuanha, 1; Rectified Spirit, 5 (by weight); Water, 36: digest twenty-four hours, and filter 40; add 66 of Sugar, and dissolve to make a syrup.

Contains 1 per cent. by weight of Ipecacuanha; U.S. made with fluid Extract, contains about 6 per cent.

*Dose.*—15 to 60 minims.

TINCTURA IPECACUANHÆ (Ger. and Russ.).—Bruised Ipecacuanha, 1; Proof Spirit, 10 (by weight): digest eight days, press, and make up to 10; this is about twice the strength of the Vinum.

(Austr. Belg. and Fr. 1 and 5; not in the others.)

HAUSTUS IPECACUANHÆ COMP.—Ipecacuanha Wine, 10 minims; Paregoric, 30 minims; Sp. Mindererus, 3 drms.; Water to 1½ oz.—*Middlesex Hospital.*

HAUSTUS IPECACUANHÆ ET AMMONIÆ.—Carbonate of Ammonia, 10 grs.; Ipecacuanha Wine, 15 minims; Chlorate of Potash, 20 grs.; Water 1 oz.—*Fever Hospital.*

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Not Official.

## JABORANDI.

The plant *Pilocarpus pinnatifolius.*

It is antagonistic in its action to Belladonna.

It causes profuse perspiration, and increases the flow of the saliva. *B.M.J.*, April 24, 1875.

*Is a very feeble hepatic stimulant.—Dr. Rutherford.*

TINCTURA (Russ.).—Jaborandi leaves cut small, 1; Rectified Spirit (70 p. c.), 5.

An active principle has been extracted by Mr. Gerrard, which he has named Pilocarpine. It is not crystalline, but an extractive mass of a yellow colour and very deliquescent. The Nitrate is a permanent Salt.

GUTTA PILOCARPIÆ.—Nitrate of Pilocarpine, 2 grs.; Water, 1 oz.—*London Ophthalmic Hospital.*

Contracts the pupil of the eye.

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## JALAPA.

### JALAP.

The dried tubercles of *Exogonium Purga;* imported from Mexico.

### *Medicinal Properties.*

A brisk cathartic, operating sometimes painfully, producing copious watery discharges. From its hydragogic powers, it is especially applicable to dropsy, when it is usually combined with Bitartrate of Potash or Calomel.

(In all the Pharmacopœias.)

*Is a moderately powerful hepatic, and a powerful intestinal stimulant.—Dr. Rutherford.*

*Dose.*—10 to 30 grs.

Contained in Pulvis Scammonii Compositus.

### Preparations.

**EXTRACTUM JALAPÆ.** Intense brown.

Jalap, in coarse powder, 1; Rectified Spirit, 5; Distilled Water, 10: macerate the Jalap in the spirit for seven days, press out the tincture, then filter and distil off the spirit, leaving a soft extract: again macerate the residual Jalap in the water for four hours, express, strain through flannel, and evaporate by a water bath to a soft extract; mix the two extracts, and evaporate at a temperature not exceeding 140° F., to a proper consistence for forming pills.

100 lbs. of Jalap yield 50 lbs. of extract.

*Dose.*—5 to 15 grs.

(Same as U.S.; not in others.)

**PULVIS JALAPÆ COMPOSITUS.** Light fawn colour.

Jalap, in powder, 5; Acid Tartrate of Potash, 9; Ginger, in powder, 1: mix. =(1 in 3).

*Dose.*—20 to 60 grs.

(Same strength as U.S. without ginger; not in others.)

**RESINA JALAPÆ.** Dark brown, brittle, and shining.

A resin obtained from Jalap, by means of Rectified Spirit.

Jalap yields from 15 to 20 per cent. of resin.

Easily soluble in Rectified Spirit, but only partially so in Ether, and insoluble in Oil of Turpentine.

*Dose.*—2 to 5 grs.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

JALAPINE, so largely prescribed, is nothing more than this Resin deprived of colour by Animal Charcoal; it may be given in the same dose, and, being in fine division, is less likely to irritate the bowels.

**TINCTURA JALAPÆ.** Deep reddish-brown.

Jalap, in coarse powder, 1; Proof Spirit, 8: macerate forty-eight hours in 6 of the spirit, agitating occasionally, pack in a percolator, and when the fluid ceases to pass, pour on the remaining spirit, press, filter, and add proof spirit to make 8. =(1 in 8).

*Dose.*—½ to 2 drms.

(Belg. Fr. and U.S. 1 in 5 by weight; not in others.)

**Not Official.**

TINCTURA JALAPÆ RESINÆ, Ger. and Russ.—Resin of Jalap, 1; Spirit (90 p. c.), 10.

SAPO JALAPINUS, Russ.—Resin of Jalap or Jalapine, 2: Soap, 2; Sp. Wine, 4; s.A.

MISTURA JALAPÆ Co.—Jalap, 7½ grs.; Sulphate of Potash, 15 grs.; Comp. Infusion of Senna, 1 oz.—*Westminster Hospital.*

PILULA JALAPÆ c. CALOMEL.—Jalap 6⅔ grs.; Calomel, 1⅓ grs.; Treacle, *q.s.* in two pills.—*Westminster Hospital.*

# JUNIPERI OLEUM.

## OIL OF JUNIPER.

The Oil distilled in Britain from the unripe fruit of *Juniperus communis.*

Sp. g. 0·855. Of very superior flavour to the imported Oil.

Solubility in Spirit, 1 in 10.

*Medicinal Properties.*

Stimulant, carminative, and diuretic, the latter property constituting its chief medicinal value. Used in debilitated dropsical cases, either alone or combined with other diuretics.

*Dose.*—1 to 3 minims.

(Austr. Belg. Fr. Ger. Russ. and U.S.; not in Dan.)

## Preparation.

**SPIRITUS JUNIPERI.** Colourless.

Oil of Juniper, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

*Dose.*—30 to 60 minims.

(Russ. 1 and 96; U.S. 1 in 50, by weight; Belg. and U.S. have a compound spirit; Fr. and Ger. by distillation.)

### Not Official.

Oleum Juniperi Empyreumaticum. Oleum Cadinum. Huile de Cade. Juniper Tar. An empyreumatic oil, resembling liquid pitch, obtained by the dry distillation of the wood of the *Juniperus Oxycedrus*.

Used as a stimulant in cases of Psoriasis and of Chronic Eczema.

(Austr. Dan. Fr. Ger. and Russ.)

## KAMALA.

KAMALA.

A fine, granular, mobile, orange-red powder, consisting of minute glands, adhering to the capsules of *Rottlera tinctora;* imported from India.

Solubility: scarcely mixing with water, but for the most part soluble in, and forming a red-coloured solution with, Alcohol and Ether.

*Test.*—Ether dissolves most of it, the residue consisting principally of tufted hairs.

*Medicinal Properties.*

Purgative. Successfully given in tænia.

*Dose.*—30 to 120 grs. of the powder suspended in Gruel, Mucilage, Treacle, or Syrup, will of itself expel the worm. A purgative should, however, follow.

(Austr. Ger. Russ. and U.S.; not in others.)

### Not Official.

Tinctura.—Kamala, 1; Proof Spirit, 5: macerate seven days, and strain.

*Dose.*—1 to 2 drms.

## KINO.

KINO.

The inspissated juice obtained by incisions made in the trunk of *Pterocarpus Marsupium;* imported from the Malabar coast.

In small, angular, brittle, glistening, reddish-black fragments, translucent, and ruby-red on the edges, inodorous, astringent.

Solubility: of 100 grains Tellicherry Kino, only 88 grains are dissolved by cold Water, and 35 grains of Isinglass will precipitate the whole of the astringent matter from the solution. Compared with Pale Catechu it is more soluble in water, and the solution is more astringent.

### *Medicinal Properties.*

A powerful astringent. Employed in obstinate diarrhœa and pyrosis. Also used for intermittents, with Cinchona. Best given in diluted Alcohol. Externally, as a styptic, and in powder to indolent and flabby ulcers.

*Dose.*—10 to 30 grs.

(Belg. Fr. Ger. Russ. and U.S.; not in Austr. and Dan.)

Contained in Pulvis Catechu Compositus.

INCOMPATIBLES.—Mineral Acids, Alkalies and Carbonates, Metallic Salts and Gelatine.

### Preparations.

**PULVIS KINO COMPOSITUS.** Reddish-brown. *Syn.* PULV. KINO CUM OPIO.

Kino, in powder, 15; Opium, in powder, 1; Cinnamon, in powder, 4. =(1 Opium in 20).

20 grains contain 1 grain Opium, in powder.

*Dose.*—5 grs. and upwards, according to the quantity of Opium required.

(Not in other Pharmacopœias.)

**TINCTURA KINO.** Intense reddish-brown.

Kino, in coarse powder, 1; Rectified Spirit, 10: macerate seven days, with occasional agitation, filter, and add Rectified Spirit to make up 10. =(1 in 10).

*Dose.*—½ to 2 drms.

(U.S. of the same strength, but with 2 of Spirit and 1 of Water; Belg. Fr. Ger. and Russ. 1 and 5, by weight; not in others.)

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## KOUSSO. *See* CUSSO.

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## KRAMERIÆ RADIX.

### RHATANY ROOT.

The dried root of *Krameria triandra;* imported from Peru.

### *Medicinal Properties.*

A powerful astringent; tonic. Used in chronic diarrhœa, passive hemorrhages and mucous discharges, as menorrhagia, leucorrhœa; and generally where Kino and Catechu are beneficial. As a gargle in relaxed sore throat. Locally in prolapsus ani or fistula ani.

*Dose.*—In powder, 20 to 60 grs.

(In all the Pharmacopœias.)

Contained in Pulvis Catechu Compositus.

INCOMPATIBLES.—Alkalies, Lime Water, Salts of Iron and Lead, Gelatine.

### Preparations.

**EXTRACTUM KRAMERIÆ.** Reddish-black.

Rhatany Root, in coarse powder, 1; cold Distilled Water, 15: macerate twenty-four hours in 2 of the water, then percolate the whole. Evaporate the liquor by a water bath, to dryness.

*Dose.*—5 to 20 grs.

(Same as Austr. Belg. Dan. Fr. Ger. Russ. and U.S.; U.S. has also a fluid extract.)

**INFUSUM KRAMERIÆ.**

Rhatany Root, bruised, 1; boiling Distilled Water, 20: infuse one hour, and strain. =(1 in 20).

*Dose.*—1 to 2 ozs.

(U.S. 1 in 15; Fr. Tisane, 1 in 50; not in others.)

**TINCTURA KRAMERIÆ.** Deep lake.

Rhatany Root, bruised, 1; Proof Spirit, 8: macerate forty-eight hours in 6 of the spirit, agitating occasionally; pack in a percolator; when it ceases to drop, pour on the remaining spirit, press the marc, filter, mix the liquids and add proof spirit to make up 8. =(1 in 8).

*Dose.*—1 to 2 drms.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S. 1 and 5; all by weight; Fr. has also Brit. Ph. formula.)

Excellent for the teeth and gums when either spongy or inflamed.

### Not Official.

SUPPOSITORIUM.—Extract of Rhatany, 8 grs.; Hydrochlorate of Morphia, $\frac{1}{16}$th gr.; Stearine, 10 grs.

LOZENGES are made of the Extract for relaxed throat.

## LAC.

Fresh milk from the Cow, *Bos Taurus.*

Used only for preparing Mistura Scammonii.

A good report on the milk supply of London, with the analysis of forty samples, will be found in *Medical Times*, January 15, 1870.

## LACTUCA.

### LETTUCE.

The flowering herb of the wild indigenous plant, *Lactuca virosa*.

*Medicinal Properties.*

Sedative, narcotic; said also to be gently laxative, powerfully diuretic, and somewhat diaphoretic. Employed in dropsy and in cases of visceral obstruction. Generally combined with Squill, Digitalis, or other diuretics.

### Preparations.

**EXTRACTUM LACTUCÆ.** Intense brown.

The inspissated juice evaporated to a pilular consistence, according to the directions given for Extractum Belladonnæ.

100 lbs. of the plant yield 50 to 55 lbs. juice = 60 to 80 ozs. of Extract.

*Dose.*—5 to 10 grs.

(Same as Belg. Fr. and Ger.; not in others.)

The extract from the root is stronger than that made from the leaves.

### Not Official.

Eau Distillée de Laitue.—From Lettuce flowers, 1 in 1. Fr. Ph.

Succus.—The expressed juice, 3; Rectified Spirit, 1: mix.

*Dose.*—1 to 2 drms.

Lactucarium.—The juice from the incised flower-stalk, collected and dried.

(Belg. Dan. Fr. Ger. Russ. and U.S.; not in Austr.)

*Dose.*—3 to 8 grs.

Tinctura Lactucarii.—Lactucarium, 1; Proof Spirit, 10: digest seven days, and filter.

*Dose.*—30 to 60 minims.

The preparations of lettuce are highly prized by some practitioners for their sedative qualities, whilst others aver that they are almost inert. The Author believes in their virtues.

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## LARICIS CORTEX.

Inner bark of the common Larch, *Larix Europæa*.

*Medicinal Properties.*

Astringent, gently stimulant, useful in bronchitis with copious expectoration.

**TINCTURA LARICIS.**

Larch Bark, in coarse powder, 1; Rectified Spirit, 8: macerate forty-eight hours in 6 of the spirit, agitating occasionally, pack in a percolator; and when it ceases to drop, pour on the remaining spirit;

press the mark, filter, mix the liquids, and add Rectified Spirit to make 8.

*Dose.*—20 to 25 minims.

## LAUROCERASI FOLIA.

CHERRY-LAUREL LEAVES.

The fresh leaves of *Prunus Laurocerasus*, Common or Cherry Laurel.

### Preparation.

**AQUA LAUROCERASI.**

Fresh leaves of common Laurel, 16: Water, 50: chop the leaves, crush them in a mortar, and macerate them in the water twenty-four hours: distil 20 of the liquid, shake the product, filter through paper, and preserve in a stoppered bottle. =(1 in 1¼).

(Austr. Belg. Fr. viz. in every 1000 minims there should be ½ a minim of real Hydrocyanic Acid; Ger. same strength as Aqua Amygdalarum Amarum, viz. 1 minim of real Hydrocyanic Acid in every 1000 mins. Aqua Amygdalarum Amarum Diluta is 20 times weaker; Russ. 1 in 1000.)

*Medicinal Properties.*

Sedative. Similar to Hydrocyanic Acid.

*Dose.*—5 to 30 minims.

INCOMPATIBLES.—Same as Hydrocyanic Acid.

ANTIDOTES.—In case of overdose, the antidotes should be as directed under Acidum Hydrocyanicum.

## LAVANDULÆ OLEUM.

OIL OF LAVENDER.

The oil distilled in Britain from the flowers of *Lavandula vera*.

Sp. gr. ·88—·89.

*Medicinal Properties.*

An aromatic stimulant and carminative. Useful in hysteria, hypochondriasis, and other nervous affections, also in flatulence and colic. Rarely given in a crude state. Used as an adjuvant to other medicines.

A hank of cotton moistened with it, and placed round the neck, prevents bugs biting that part.

*Dose.*—1 to 4 minims.

Contained in Linimentum Camphoræ Compositum.

### Preparations.

**SPIRITUS LAVANDULÆ.** Colourless.

Oil of Lavender, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

*Dose.*—30 to 60 minims.

(Belg. 3 in 1000; Russ. 1 in 96; U.S. 1 and 49; all with the oil and by weight; Austr. Dan. Fr. and Ger. from the flowers.)

**TINCTURA LAVANDULÆ COMPOSITA.** Deep lake. *Syn.* SP. LAVAND. COMP.

Oil of Lavender, 90 minims; Oil of Rosemary, 10 minims; Cinnamon Bark, bruised, 150 grs.; Nutmeg, bruised, 150 grs.; Red Sandal-wood, 300 grs.; Rectified Spirit, 40 ozs.: macerate the Cinnamon, Nutmeg, and Red Sandal-wood in the spirit for seven days, then press out and strain; dissolve the Oils in the strained tincture, filter, and add sufficient Rectified Spirit to make 40 ozs.

Or Spirit of Lavender, 30; Spirit of Rosemary, 3½; Cinnamon, 1; Nutmeg, 1; Red Sanders, 2; Rectified Spirit, to make 128.

*Dose.*—½ to 2 drms.

Used to colour Liq. Arsenicalis.

(Fr. gives Brit. formula; U.S. (Sp. Lavand. Co.) much stronger and with diluted alcohol; Belg. (Alcoholetum Lavand. Comp.) and Dan. (Tinct. Lavand. Rubr.) much the same, but differ considerably from Brit.; not in the others.)

## LIMON.

### LEMON.

The ripe fruit of *Citrus Limonum,* imported from Southern Europe.

## LIMONIS CORTEX.

### LEMON PEEL.

The outer part of the rind of the fresh fruit.

### *Medicinal Properties.*

A warm aromatic. Added to stomachic tinctures and infusions. Particularly applicable to dyspepsia.

Contained in Inf. Aurant. Comp. and Inf. Gentian. Comp.

INCOMPATIBLES.—Mineral Acids and Lime Water.

### Preparations.

**OLEUM LIMONIS.** Pale yellow.

The Oil expressed or distilled from fresh peel; imported chiefly from Sicily. The best Oil does not deposit by keeping.

Solubility, in all proportions of Glacial Acetic Acid, 1 in 10 of Spirit.

Sp. gr. ·85—·86.

Stimulant and carminative. Chiefly used, however, to impart flavour to other medicines. Externally, stimulant and rubefacient.

Its flavour and aroma suffer much from keeping; it should always be procured as fresh as possible.

*Dose.*—1 to 4 minims.

(Austr. Belg. Ger. and Russ. Oleum Citri; Dan. Aetheroleum Cedro; Fr. Huile volatile de Citron; U.S. Oleum Limonis.)

Contained in Lin. Potass. Iod. cum Sapone, and Spiritus Ammoniæ Aromaticus.

**SYRUPUS LIMONIS.** Light Brown.

Fresh Lemon Peel, 2; Lemon Juice, strained, 20; Refined Sugar, 36. Heat the lemon juice to the boiling point, and having put it into a covered vessel with the lemon peel, let them stand until they are cold, then filter and dissolve the sugar in the filtered liquid with a gentle heat. The product should weigh 56 and measure 41.

Sp. g. 1·340. =(2 Peel and 20 Juice in 41).

*Dose.*—1 to 2 drms.

(Austr. Belg. Fr. Ger. and U.S. all made with Lemon juice, but differ in the quantities of Sugar; Russ. with Citric Acid and Oleosaccharate of Lemon; not in Dan.)

**TINCTURA LIMONIS.** Pale Brown.

Fresh Lemon Peel, sliced thin, 1; Proof Spirit, 8: macerate for seven days in a closed vessel with occasional agitation, strain, press, filter, and make up (if necessary) with proof spirit to 8. =(1 in 8).

*Dose.*—½ to 2 drms.

(Fr. Alcoolature, 1 Recent Peel to 2 of Alcohol; not in others.)

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## LIMONIS SUCCUS.

### LEMON JUICE.

The freshly expressed juice of the ripe fruit.

To preserve the juice it may be heated to 150°, filtered, and set aside in bottles completely filled. If this process be performed during the winter, it is said that the juice may be kept perfectly good for twelve months. Mr. Schweitzer states that if one-tenth part of Alcohol be added to Fresh Lemon Juice, it prevents decomposition, and the juice is rendered fit for exportation.

Average quantity of Citric Acid in a fluid ounce is 32·5 grs., and the average sp. g. is 1·039.

The neutralizing quantities for effervescing mixtures are given under Acidum Citricum, p. 10.

### *Medicinal Properties.*

Refrigerant; when diluted, a refreshing beverage in scurvy and in febrile and inflammatory affections.

In acute Rheumatism, ½ to 1 pint daily. Combined with Opium and Cinchona.

A local application in pruritus scroti and uterine hemorrhage.

*Dose.*—½ to 4 ozs.

Contained in Syrupus Limonis.

### Preparations.

**ACIDUM CITRICUM.** *See* ACIDUM CITRICUM.

# LINIMENTA.

## LINIMENTS.

This group has received some valuable additions in the British Pharmacopœia. The Pharmacopœia Committee, in order to guard against mistakes, have called *strong Tinctures* that are employed for external use by the name of *Liniments*, so that all the Tinctures may now be considered for *internal* use.

The following are the Liniments of the British Pharmacopœia, the formulas of which will be found under the names of the substances from which they are prepared:— .

| | | Proportion of the active ingredient to the whole. |
|---|---|---|
| LINIMENTUM ACONITI | | 1 in 1. |
| LINIMENTUM AMMONIÆ | Solution of Ammonia. | 1 in 4. |
| LINIMENTUM BELLADONNÆ | | 1 in 1. |
| LINIMENTUM CALCIS | | 1 in 2. |
| LINIMENTUM CAMPHORÆ | | 1 in 5. |
| LINIMENTUM CAMPHORÆ COMP. | Strong Ammonia. | 1 in 4½. |
| LINIMENTUM CHLOROFORMI | | 1 in 2. |
| LINIMENTUM CROTONIS | | 1 in 8. |
| LINIMENTUM HYDRARGYRI | 1 of Mercury | in 6. |
| LINIMENTUM IODI | of Iodine | 1¼ in 10. |
| LINIMENTUM OPII | (Tinct. Opii) | 1 in 2. |
| LINIMENTUM POTASSII IODIDI CUM SAPONE | | 1 in 9. |
| LINIMENTUM SAPONIS. | | |
| LINIMENTUM SINAPIS COMP. | (Oil Mustard) | 1 in 40. |
| LINIMENTUM TEREBINTHINÆ | | 1 in 1⅓. |
| LINIMENTUM TEREBINTHINÆ ACETICUM | | 1 in 3. |

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# LINUM.

## FLAX.

The plant *Linum usitatissimum* is almost universally grown, the seeds only being of medicinal value, from which are procured the Meal and the Oil of Linseed.

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## LINI FARINA.

### LINSEED MEAL.

The seeds of *Linum usitatissimum*, ground and deprived of the oil by expression, and the cakes reduced to powder.

### Preparation.

**CATAPLASMA LINI.**

Linseed Meal, 4; Olive Oil, ½; boiling Water, 10: mix the linseed meal with the water gradually, then add the oil with constant stirring.

Applied to inflamed and suppurating parts.

(Fr.; not in others.)

The bruised seeds, if fresh, are preferred to the meal.

## LINI SEMINA.

LINSEED.

The seeds of *Linum usitatissimum*, the envelope or testa of which abounds in a peculiar gummy matter or mucilage, readily imparted to hot water. Cultivated in Britain.

(In all the Pharmacopœias.)

### *Medicinal Properties.*

Demulcent and emollient. Employed in catarrh, dysentery, nephritic and calculous complaints, and inflammatory affections of the mucous membranes and urinary passages.

### Preparations.

**INFUSUM LINI.**

Linseed, 160 grs.; fresh Liquorice Root, sliced, 60 grs.; boiling Distilled Water, 10 ozs.: infuse four hours, and strain. =(1 in 30).

(U.S. nearly same as Brit.; not in others.)

INCOMPATIBLES.—Preparations of lead and iron, and most metallic salts.

**OLEUM LINI.** Brown.

The Oil expressed from linseed without heat. Sp. g. ·927 to ·934.

(In all the Pharmacopœias except Austr.)

A useful emollient to burns or scalds, either alone or mixed with Lime Water.

As an enema a pint of Linseed Oil thrown up removes impacted fæces with less pain and spasm than gruel or other aqueous enema.

Linseed Oil, when issuing from the seed whilst pressing, has scarcely any of the odour or taste of the Linseed Oil of the shops, but is acquired in a very short time by exposure to the air. For medicinal purposes it should be procured as fresh as possible.

## LIQUORES.

SOLUTIONS.

The following are the Solutions of the British Pharmacopœia, the formulas of which will be found under the names of the substances from which they are prepared:—

| | Proportions of active ingredient to the whole. |
|---|---|
| LIQUOR AMMONIÆ. | $\frac{1}{3}$ the strength of Liq. Amm. Fort. |
| LIQUOR AMMONIÆ ACETATIS. | |
| LIQUOR AMMONIÆ CITRATIS. | |
| LIQUOR AMMONIÆ FORTIOR. | |
| LIQUOR ANTIMONII CHLORIDI. | |

| | Proportions of active ingredient to the whole. |
|---|---|
| LIQUOR ARSENICALIS | 1 in 120. |
| LIQUOR ARSENICI HYDROCHLORICUS | 1 in 120. |
| LIQUOR ATROPIÆ | 1 in 120. |
| LIQUOR ATROPIÆ SULPHATIS | 1 in 120. |
| LIQUOR BISMUTHI ET AMMON. CITRAT. | |
| LIQUOR CALCIS | 1 in 800. |
| LIQUOR CALCIS CHLORATÆ | 1 in 10. |
| LIQUOR CALCIS SACCHARATUS | 1 in 68. |
| LIQUOR CHLORI. Solution of Chlorine. | |
| LIQUOR EPISPASTICUS. Blistering Liquid. | |
| LIQUOR FERRI PERCHLORIDI. | |
| LIQUOR FERRI PERCHLORIDI FORTIOR. | |
| LIQUOR FERRI PERNITRATIS. | |
| LIQUOR FERRI PERSULPHATIS. | |
| LIQUOR GUTTA-PERCHA. | |
| LIQUOR HYDRARGYRI NITRATIS ACIDUS. Caustic | |
| LIQUOR HYDRARGYRI PERCHLORIDI | 1 in 960. |
| LIQUOR IODI . . . . . . . . . . Iodine. | 1 in 24. |
| LIQUOR LITHIÆ EFFERVESCENS | 5 grs. in 10 ozs. |
| LIQUOR MAGNESIÆ CARBONATIS | 1 in 37. |
| LIQUOR MAGNESIÆ CITRATIS. | |
| LIQUOR MORPHIÆ ACETATIS | 1 in 123. |
| LIQUOR MORPHIÆ HYDROCHLORATIS | 1 in 123. |
| LIQUOR PLUMBI SUBACETATIS. | |
| LIQUOR PLUMBI SUBACETATIS DILUTUS. | |
| LIQUOR POTASSÆ . . . Hydrate of Potash. | 1 in 18. |
| LIQUOR POTASSÆ EFFERVESCENS. | |
| LIQUOR POTASSÆ PERMANGANATIS | 1 in 120. |
| LIQUOR SODÆ . . . . . Hydrate of Soda. | 1 in 25. |
| LIQUOR SODÆ ARSENIATIS | 1 in 120. |
| LIQUOR SODÆ CHLORATÆ. | |
| LIQUOR SODÆ EFFERVESCENS. Bicarbonate | 1 in 320. |
| LIQUOR STRYCHNIÆ | 1 in 120. |
| LIQUOR ZINCI CHLORIDI. | |

Liquors not official will be found in the Index.

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Not Official.

## LITHIA.

LITHIA.

$L_2O$, eq. 30.

The Oxide of the Alkaline metal Lithium (L, eq. 7), a silver-white, brilliant, ductile metal, having the density of 0·59, being therefore the lightest metal known.

This oxide was introduced into medicinal use by Dr. Garrod. It was discovered in 1817, by Arfvedson. It is obtained from several minerals,—Petalite, Lepidolite, and Triphylline, from the latter of which the Author has chiefly prepared it.

The Carbonate and Citrate are the only official preparations.

## LITHIÆ CARBONAS.

### CARBONATE OF LITHIA.

$L_2CO_3$, eq. 74.

In white powder or in minute crystalline grains.

Solubility: 1 in 100 of cold Water. Insoluble in Alcohol.

*Test.*—It dissolves in Hydrochloric Acid; this solution, evaporated to dryness, imparts to the flame of a spirit lamp a red colour. 10 grains of the Salt neutralized with Sulphuric Acid, and afterwards heated to redness, leave 14·86 grains of dry Sulphate of Lithia, which, when redissolved in Distilled Water, yield no precipitate with Oxalate of Ammonia or Solution of Lime—indicating absence of Lime, Magnesia, and Alumina.

*Medicinal Properties.*

Lithia, combined with Carbonic Acid, given in a diluted solution, as in Lithia Water, acts as a powerful diuretic, probably more so than the corresponding Salts of Potash or Soda. In certain states of the system in which Urate of Soda is liable to be deposited in the tissues, leading to the production of gouty inflammation, the administration of Lithia Salts is attended with advantage, probably by aiding elimination, and likewise by assisting the solution of the urate in the animal fluids. Urate of Lithia is very soluble; Lithia salts are therefore most useful when Uric Acid abounds in the urine.

*Dose.*—3 to 6 grs. in 3 or 4 ozs. aërated water.

(Ger. and Russ. (Lithium Carbonicum); U.S.; not in others.)

**LIQUOR LITHIÆ EFFERVESCENS.** Colourless.

10 ozs. contain 5 grs. Carbonate of Lithia.

*Dose.*—5 to 10 ozs.

## LITHIÆ CITRAS.

### CITRATE OF LITHIA.

$L_3C_6H_5O_7$, eq. 210.

A white, deliquescent, amorphous powder, made by acting upon 50 grains of Carbonate of Lithia with 90 grains of Citric Acid, dissolved in 1 oz. of water.

100 of Acid are required, and the Citrate is crystalline, not deliquescent.—Ed.

Solubility: 1 in 2½ of Water, without leaving any residue.

*Test.*—20 grains of the Salt, burned at a low red heat, with free access of air, leave 10·6 grains of white residue: Carbonate of Lithia.

*Medicinal Properties.*

Similar to those of the Carbonate.

*Dose.*—5 to 10 grs. largely diluted.

(U.S.; not in others.)

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**Not Official.**

Lithiæ Guaiacum.—Is prepared by digesting pure Guaiacum Resin in an aqueous solution of Lithia, decanting the clear solution, evaporating and scaling it.

Composed of Lithia, 1; Guaiacum Resin, 3.

This salt, introduced by Dr. Garrod, is given for chronic gout and some forms of rheumatism.

*Dose.*—5 grs. twice a day.

The Author is indebted to Mr. Sandford for this information.

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# LOBELIA.

## LOBELIA.

The herb *Lobelia inflata* in flower, dried; imported from North America.

*Medicinal Properties.*

In small doses it is diaphoretic and expectorant. More freely used, it is cathartic and emetic; but as an emetic it is too distressing as well as too hazardous for general use, as it has a powerful effect on the respiration, and may cause death. It is chiefly used in spasmodic asthma, also in catarrh and other laryngeal and pectoral affections, severe croup, and chronic bronchitis. In some cases a useful adjunct to diuretics.

(Austr. Belg. Fr. and U.S.; not in others.)

Antidotes.—In case of poisoning by Lobelia, the most active stimulants, internal as well as external, should be employed. Tannic Acid or Gallic Acid or strong tea frequently repeated, warmth to the surface, recumbent position important.

### Preparations.

**TINCTURA LOBELIÆ.** Dark greenish-brown.

Lobelia, in coarse powder, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, and let it drain, pour on the remaining spirit, and when it ceases to drop, press the marc, filter, and add proof spirit to make up 8.
=(1 in 8).

(Austr. 1 and 5; Belg. and Fr. 1 in 5; Dan. Ger. and Russ. 1 and 10; U.S. about 1 and 7; all by weight.)

*Dose.*—(Pharm. Brit.) 10 to 30 minim ; but 1 drm. may be given for dyspnœa; 4 drms. as an emetic.

**TINCTURA LOBELIÆ ÆTHEREA.** Intense brownish-green.

Lobelia, in coarse powder, 1; Spirit of Ether, 8: macerate seven days, press, filter, and add sufficient Spirit of Ether to make up 8. =(1 in 8).

*Dose.*—10 to 30 minims as an antispasmodic.

(Belg. 1 in 5 by weight; not in others.)

## LUPULUS.

### HOP.

The dried strobiles of the female plant of *Humulus Lupulus*, cultivated in England.

*Medicinal Properties.*

Tonic, stomachic, and moderately narcotic. Used in diseases of local debility with morbid vigilance and other nervous derangement, producing sleep where opiates are objectionable. Hops may be used topically as fomentation or poultice, as a resolvent or discutient in painful swellings and tumours. Very freshly dried Hops are made into a pillow, to procure sleep.

(Austr. Belg. Dan. Fr. (Houblon) Ger. Russ. and U.S.)

INCOMPATIBLES.—Mineral acids, metallic salts.

### Preparations.

**EXTRACTUM LUPULI.** Greenish-brown.

Hop, 8; Rectified Spirit, 15; Distilled Water, 80: macerate the hop in the spirit for seven days, press out the tincture, filter, and distil off the spirit, leaving a soft extract; boil the residual hop with the water for one hour, then press out the liquor, strain, and evaporate by a water bath to the consistence of a soft extract; mix the two extracts, and evaporate, at a temperature not exceeding 140° F., to a pilular consistence.

1 lb. Hop. yields 4 ozs. Extract.

*Dose.*—5 to 10 grains.

(Belg. Fr. and Russ. have alcoholic Extracts, but not made the same way as Brit.; U.S. has a fluid Extract from Lupulin; not in others.)

**INFUSUM LUPULI.**

Hop, 1; boiling Distilled Water, 20: infuse two hours, and strain. =(1 in 20).

*Dose.*—1 to 2 oz.

(U.S. about 1 in 32; Fr. 1 in 100; not in others.)

**TINCTURA LUPULI.** Deep red.

Hop, 1; Proof Spirit, 8: macerate forty-eight hours in 6 of the spirit, agitating occasionally, pack in a percolator, let it drain, add to it the remaining spirit, and when the fluid ceases to drop, press, filter, and add proof spirit to make up 8. =(1 in 8).

*Dose.*—½ to 2 drms.

(Belg. 1 in 5—also Tinctura Vinosa, made with Alcohol and Malaga, 1 in 33 by weight; U.S. made from Lupulin: not in others.)

Not Official.

LUPULIN.—The golden dust or glands separated from the strobile of the Hop.

It is sometimes conveniently used in doses of 5 to 10 grs.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

EXTRACTUM LUPULINÆ.—Exhaust Lupulin with Rectified Spirit, and evaporate the strained liquor to a proper consistence. The extract produced is just half the original weight of the Lupulin employed.

*Dose.*—3 to 6 grs.

TINCTURA LUPULINÆ (U.S.).—Lupulin, 4 troy ounces; Alcohol, *q. s.*; pack the Lupulin in a percolator and gradually pour Alcohol upon it until two pints (32 fl. oz.) of tincture are obtained.

*Dose.*—½ to 2 drms.

Not Official.

## MAGNESIUM.

### MAGNESIUM.

**Mg**, eq. 24.

Magnesium, the metallic base of Magnesian Salts, does not exist native. It may be obtained artificially. When set on fire it produces a powerful actinic light, and is used by photographers on this account.

It is a brilliant grey metal, sp. g. 1·750, slightly resembling Silver, malleable, fusible at a low temperature, and convertible into Magnesia by the combined action of air and moisture.

Sulphate of Magnesia was first artificially obtained in England by Dr. Crew in 1675, by evaporation from the water of Epsom spring (whence the name of Epsom Salts). The chief source of the Magnesia now sold is Magnesian Limestone, Double Carbonate of Magnesia and Lime, called Dolomite, and is obtained by a process discovered by Dr. Henry, of Manchester. Magnesia was first chemically distinguished from Lime by Dr. Black, in 1755, who also showed the difference between Magnesia and its carbonate. From the mode of procuring it, it is frequently termed Calcined Magnesia.

There are two kinds of Magnesia admitted into the Pharmacopœia, the heavy and the light. The former is that which is commonly used in pharmacy, it being smoother, more readily miscible with water, and more compact. It is probably from these causes that it is preferred in medicine, and in the Pharmacopœia it is clearly meant to be used, unless the light is expressly ordered.

The forms in which Magnesia is used are:—Magnesia, Magnesia Levis, Magnesiæ Carbonas, Magnesiæ Carbonas Levis, and Magnesiæ Sulphas.

*Note.*—Soapstone or Talc Steatite, commonly called French Chalk, is a silicate of Magnesia and Alumina, and consists of Silica, 45; Magnesia, 24·75; Alumina, 9·25; Potash, 0·75; Oxide of Iron, 1; Water, 18. (Klaproth.)

## MAGNESIA.

### MAGNESIA.

**MgO**, eq. 40.

Heavy Carbonate of Magnesia, heated in a Cornish crucible until all the Carbonic Acid is driven off.

It is a white powder, scarcely soluble in water, but readily dissolved by acids without effervescence. Its solution in Hydrochloric Acid, when neutralized by a mixed solution of Ammonia and Chloride of Ammonium, gives a copious crystalline precipitate when Phosphate of Soda is added to it.

Solubility: 1 in 5,412 of cold Water, 1 in 36,000 of hot Water; like lime, it is more soluble in cold than in hot water.

*Test.*—Dissolved in Nitric Acid and neutralized with a mixture of Ammonia and Chloride of Ammonium, it does not give any precipitate with Oxalate of Ammonia or Chloride of Barium—indicating absence of Lime and Sulphates.

*Medicinal Properties.*

Antacid, alterative, laxative, and antilithic. Much used in dyspepsia, heart-burn, sick headache, gout, and other complaints attended with acidity, and constipation. As a laxative, it may often be used with advantage when other medicines occasion nausea; generally combined with other purgatives. It is an excellent and mild purgative for children.

It frequently becomes aggregated into a solid mass when prescribed in mixtures, especially when prescribed with the sulphate.

*Dose.*—10 to 20 grs. as an antacid and alterative, 20 to 60 grs. as a purgative.

(Dan. Oxydum Magnesicum ponderosum; Fr. U.S.; not in others.)

Although the heavy powder is preferred by many for its smoothness, the light powder is found to be quicker in its action.

INCOMPATIBLES.—All acids.

## MAGNESIA LEVIS.

### LIGHT MAGNESIA.

**MgO**, eq. 40.

Light Carbonate of Magnesia, heated in a Cornish crucible until all the Carbonic Acid is driven off.

A bulky white powder, differing from Magnesia (heavy Magnesia) only in its great levity, the volumes corresponding to the same weight being in the ratio of 3½ to 1.

It does not mix so readily with water, nor does it make so smooth a draught as the heavy.

*Test.*—Does not effervesce with Acids.

*Dose.*—10 to 20 grs. as an antacid; 20 to 60 grs. as a purgative.

(In all the Pharmacopœias.)

Contained in Pulvis Rhei Comp.

## MAGNESIÆ CARBONAS.

### CARBONATE OF MAGNESIA (HEAVY).

$(MgCO_3)_3\,MgO.\ 5H_2O$, eq. 382.

A white powder, precipitated from a boiling solution of Sulphate of Magnesia by a solution of Carbonate of Soda, the whole evaporated to dryness, and the dry residue digested in water and collected on a filter and washed, so that the Sulphate of Soda is entirely washed out: it is then dried at 212° F.

*Test.*—With excess of Hydrochloric Acid it forms a clear solution, in which Chloride of Barium causes no precipitate—indicating absence of Sulphuric Acid. Another portion of the solution, supersaturated with Ammonia, when filtered, gives no precipitate with Oxalic Acid—indicating absence of Lime. 50 grains calcined at a red heat are reduced to 22.

*Dose.*—10 to 20 grs. as an antacid; 30 to 60 grs. as a purgative.

(Dan.; Ger. and Russ. Magnesia Carbonica; U.S.; not in others.)

### Preparation.

**LIQUOR MAGNESIÆ CARBONATIS.** Colourless. *Syn.* FLUID MAGNESIA.

Is prepared by impregnating water with Carbonic Acid under pressure in which freshly precipitated Carbonate of Magnesia is suspended.

Each fluid ounce contains 13 grains of Carbonate = 5 grains of Calcined Magnesia.

*Dose.*—1 to 2 oz.

### Not Official.

MISTURA ALBA.—Carbonate of Magnesia, 10 grs.; Sulphate of Magnesia, 1 drm.; Peppermint Water, 1 oz.—*King's College Hospital.*

MISTURA MAGNESIÆ C. RHEO.—Rhubarb, 7½ grs.; Carbonate of Magnesia, 15 grs.; Peppermint Water to 1 oz.—*St. Thomas's Hospital.*

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## MAGNESIÆ CARBONAS LEVIS.

### LIGHT CARBONATE OF MAGNESIA.

$(MgCO_3)_3MgO.\ 5H_2O$, eq. 382.

A very light powder, precipitated cold from Sulphate of Magnesia solution by Carbonate of Soda, the precipitate being washed in boiling water until the washings do not precipitate with Chloride of Barium, is then dried at 212°. F. When examined under the microscope, it is found to be partly amorphous, with numerous slender prisms intermixed. In other respects it is similar to Magnesiæ Carbonas.

Solubility: 1 in 2,493 of cold Water, 1 in 9,000 of hot Water.

*Dose.*—10 to 20 grs. as an antacid; 30 to 60 grs. as a purgative.

(In all the Pharmacopœias.)

## MAGNESIÆ CITRATIS LIQUOR.

### SOLUTION OF CITRATE OF MAGNESIA.

| | |
|---|---|
| Carbonate of Magnesia . . . . | 100 grains. |
| Citric Acid . . . . . . . | 200 grains. |
| Syrup of Lemons . . . . . | ½ fluid ounce. |
| Bicarbonate of Potash, in crystals . . | 40 grains. |
| Water . . . . . . . . . | a sufficiency. |

Dissolve the Citric Acid in two ounces of the water, and having added the Carbonate of Magnesia, stir until it is dissolved. Filter the solution into a strong half-pint bottle, add the Syrup and sufficient water to nearly fill the bottle, then introduce the Bicarbonate of Potash, and immediately close the bottle with a cork, which should be secured with string or wire; afterwards shake the bottle until the Bicarbonate of Potash is dissolved.

*Dose.*—5 to 10 oz.

(The U.S. formula modified. Fr. Limonade Purgative.)

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## MAGNESIÆ SULPHAS.

### SULPHATE OF MAGNESIA. EPSOM SALT.

$MgSO_4 . 7H_2O$, eq. 246.

In minute, colourless, transparent, rhombic prisms, possessing a bitter taste.

Solubility: 10 in 13 of cold Water, and measures 18.

*Test.*—The aqueous solution gives copious white precipitates with Chloride of Barium (sulphate), and with a mixed solution of Ammonia, Chloride of Ammonium and Phosphate of Soda (Ammonio-Magnesian Phosphate); at ordinary temperatures it is not precipitated by Oxalate of Ammonia—indicating absence of Lime, nor does it give a brown precipitate with Chlorinated Lime or Soda—indicating absence of Iron. The precipitate given by Carbonate of Soda, when obtained from a boiling solution of 100 grains of the salt, should, when well washed, dried, and heated to redness, weigh 16·26 grains.

(In all the Pharmacopœias; Dan. Sulphas Magnesicus.)

Contained in Mistura Sennæ Comp. 1 in 5.

### *Medicinal Properties.*

A mild and safe cathartic, operating with little pain or nausea. Used in colic and obstinate constipation, and in most cases where a cathartic is required which shall not cause debility or relaxation of the stomach.

*Stimulates the intestinal glands, but not the liver.—Dr. Rutherford.*

*Dose.*—2 to 4 drms.

INCOMPATIBLES.—Alkaline Carbonates, Lime Water, Acetate of Lead, Nitrate of Silver.

Sulphate of Magnesia should not be prescribed with Tartarated Soda, for although the solutions of these two salts are transparent when first mixed, yet after some time Tartrate of Magnesia will precipitate. The following prescription will illustrate this:—

℞ Sodæ Tartaratæ, ʒj; Magnes. Sulph., ʒij; Aquæ ad ℥iss.

## Preparation.

### ENEMA MAGNESIÆ SULPHATIS.

Sulphate of Magnesia, 1 oz.; Olive Oil, 1 oz.; Mucilage of Starch, 15 oz.: dissolve the Sulphate of Magnesia in the mucilage, then add the oil, and mix.

For one enema.

(Not in other Pharmacopœias.)

### Not Official.

Liquor Magnesiæ Sulphatis (Dr. Henry, of Dublin).—Saturated solution of Sulphate of Magnesia, 7 (equal to 4 of crystals); Diluted Sulphuric Acid, 1: mix.

Mistura Magnesiæ Sulphatis c. Rheo Infantium.—Sulphate of Magnesia, 1 drm.; Tincture of Rhubarb, 2 drms.; Syrup of Ginger, 1 drm.; Caraway Water to 1½ oz.—*Dose*, 1 to 2 drms.—*King's College Hospital.*

Magnesiæ Sulphis.—Russ. Magnesia Sulphurosa.—*Dose*, 20 to 30 grains.

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# MANGANESII OXIDUM NIGRUM.

## BLACK OXIDE OF MANGANESE.

$MnO_2$, eq. 87.

Used for producing Chlorine.

(In all the Pharmacopœias.)

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### Not Official.

Manganesii Oxidum Præparatum.—Digest finely powdered commercial black oxide in diluted Hydrochloric Acid for twenty-four hours, frequently shaking the bottle containing them; then pour off the acid; wash the oxide thoroughly with water, pouring off the lighter portions each time for use, and rejecting the heavier and coarser particles; finally dry in a water bath.

An admirable remedy for gastrodynia, pyrosis, etc.

*Dose.*—10 to 30 grs.

Sulphate of Manganese, U.S.—A useful purgative in gouty affections; is, however, little used, being uncertan in its action, and apt to cause vomiting; its taste is disagreeably styptic.

*Does not excite the liver, but is a powerful stimulant to the intestines.—Dr. Rutherford.*

Manganese has been associated with Iron in several recent pharmaceutical preparations, *e.g.* Syrupus Ferri Phosph. c. Manganesio.

# MANNA.

## MANNA.

A concrete exudation, obtained by incision from the stem of *Fraxinus Ornus* and *F. rotundifolia*, which are cultivated for the purpose chiefly in Calabria and Sicily.

The larger and better kinds are called Flake Manna, and consist principally (70 to 80 per cent.) of Mannite, $C_3H_7O_3$, eq. 91; together with common Sugar and extractive matter.

Solubility of Mannite in Water, 1 in 5; in Rectified Spirit, 1 in 120.

### *Medicinal Properties.*

Nutritious, particularly when recent. A mild laxative; does not excite inflammation; useful for children and delicate females.

*Dose.*—As a laxative, from ½ to 1 oz.

(In all the Pharmacopœias.)

A convenient way of having Manna in a state ready for dispensing is previously to dissolve a quantity in water, strain, and evaporate to the original weight of the Manna acted upon. It keeps good for a long time.

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# MARMOR ALBUM.

## WHITE MARBLE.

$CaCO_3$, eq. 100.

Used in producing Carbonic Acid Gas.

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# MASTICHE.

## MASTIC.

A resinous exudation obtained by incision from the stem of *Pistacia Lentiscus*, produced in the island of Scio.

Small irregular yellowish tears, brittle and transparent.

Solubility: insoluble in Water; almost entirely soluble in Alcohol, Ether, Chloroform, and Oil of Turpentine.

Sp. g. 1·06—1·07.

### *Medicinal Properties.*

Stimulant. Chiefly prescribed in pills to divide active medicines, and especially with mercurials when the pills are to be silvered, to prevent the silver being acted on by the mercury.

*Dose.*—In powder, 20 to 40 grs.

(In all the Pharmacopœias; Dan. Resina Mastix.)

Cotton, saturated in a solution of 2 parts of Mastic with 1 of Ether, is a good stopping for decayed teeth.

(Fr. equal weights of Ether and Rectified Spirit, adding Mastic to saturation.)

## MATICÆ FOLIA.

MATICO LEAVES.

The dried leaves of *Artanthe elongata*, imported from Peru.

*Medicinal Properties.*

An agreeable aromatic tonic and stimulant, influencing the urinary passages. Locally (in substance) as a styptic, on the supposition that its action is mechanical. Its styptic properties, however, may depend on the Terebinthinate Oil it contains.

*Dose.*—Of the powder, 30 to 120 grs. three times daily.

(Fr. Russ. and U.S.; not in others.)

### Preparation.

**INFUSUM MATICÆ.**

Matico leaves, cut small, 1; boiling Distilled Water, 20: infuse half an hour, and strain.

*Dose.*—1 to 4 ozs.

(Not in others.)

**Not Official.**

TINCTURA.—Matico leaves, in coarse powder, 1; Proof Spirit, 5: macerate fourteen days, strain, express, and filter. = (1 in 5).

Astringent. Useful in catarrh of the bladder of the aged.

*Dose.*—1 to 2 drms.

(Russ. 1 and 5; not in others.)

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## MEL.

HONEY.

A saccharine secretion deposited in the honeycomb by *Apis Mellifica*, the Hive Bee.

*Test.*—Boiled with Water for five minutes, and allowed to cool, it does not become blue with the Solution of Iodine—indicating absence of Flour.

(In all the Pharmacopœias.)

*Medicinal Properties.*

Demulcent and laxative, but apt to gripe and occasion flatulency when given in efficient doses; this is more particularly the case with old honey. It is more generally used as a vehicle for other medicines. A useful addition to gargles—with sage, for instance. An external application to foul ulcers. Equal parts honey and flour, an excellent poultice for boils.

### Preparations.

**MEL BORACIS.** 1 in 8 nearly. *See* BORAX.

**MEL DEPURATUM.** CLARIFIED HONEY. Light yellowish-brown.

Melt in a water bath, and strain while hot through flannel previously moistened with warm water.

(In all the Pharmacopœias except Fr.)

**OXYMEL.** Brown.

Clarified Honey, 8; Acetic Acid, 1; Distilled Water, 1: liquefy the honey by heat, and mix with it the other two.

A pleasant addition to Gargles. Sometimes used as a vehicle to expectorant medicines, and to flavour fever drinks.

*Dose.*—1 to 2 drms.

(Austr. Honey, 2, Common Vinegar 1; Belg. Honey 4, Sugar 3, Dil. Acet. Acid 3; Fr. Honey 4, White Vinegar 1; Ger. Honey 40, diluted Acetic Acid 1; Russ. Honey 15, Acetic Acid (25 per cent.) 1; not in Dan. and U.S.)

# MENTHÆ PIPERITÆ OLEUM.

## OIL OF PEPPERMINT.

The Oil distilled in Britain from fresh flowering Peppermint, *Mentha Piperita.*

Sp. g. 0·920.

Contained in Pilula Rhei Composita.

### *Medicinal Properties.*

A grateful aromatic, stimulant, and carminative. Allays nausea, relieves spasmodic pains in the stomach. Useful in the flatulent colic of children. Covers the taste of nauseous medicines, such as Rhubarb, and mitigates the griping effect of purgatives. Externally applied, relieves facial neuralgia.

The fresh herb, bruised, and applied to the epigastrium, often allays sickness, and is useful in cholera infantium.

*Dose.*—1 to 4 minims on sugar, or in emulsion.

(In all the Pharmacopœias.)

### Preparations.

**AQUA MENTHÆ PIPERITÆ.**

Oil of Peppermint, 1½ drms.; Water, 1½ galls.: distil 1 gall. =(Oil 1 in 853).

*Dose.*—1 to 2 ozs.

(Russ. ½ the strength; U.S. stronger; Austr. Belg. Dan. Fr. and Ger. distilled from the leaves.)

**ESSENTIA MENTHÆ PIPERITÆ.** Straw colour.

Oil of Peppermint, 1; Rectified Spirit, 4: mix. =(1 in 5).

*Dose.*—10 to 20 minims.

**SPIRITUS MENTHÆ PIPERITÆ.** Colourless.

Oil of Peppermint, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

(Ger. 1 in 10; U.S. from the leaves and oil, about 1 in 16; Fr. Alcoölat de Menthe Poivrée (from the fresh leaves); Austr. from leaves; not in others.)

*Dose.*—30 to 60 minims, or for children under 5 years, 1 to 3 minims.

NOTE.—An agreeable syrup is made by adding 60 minims of the spirit to 1 oz. of Syrup.

# MENTHÆ VIRIDIS OLEUM.

## OIL OF SPEARMINT.

The Oil distilled in Britain from fresh flowering Spearmint, *Mentha viridis.*

*Medicinal Properties.*

Similar to those of Oleum Menthæ Piperitæ.

*Dose.*—1 to 4 minims on sugar in emulsion, or made into pills with powder of Gentian.

(In all the Pharmacopœias.)

### Preparation.

**AQUA MENTHÆ VIRIDIS.**

Oil of Spearmint, 1½ drms.; Water, 1½ galls.: distil 1 gall. =(Oil 1 in 853).

*Dose.*—1 to 2 oz.

(U.S. stronger; Belg. and Russ. much weaker; Dan. and Ger. from leaves; not in others.)

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Not Official.

## MENTHOL.

Menthol or Japanese Peppermint Camphor is the stearoptene of Peppermint oils, it melts at 42° C. (108° F.) and boils at 212° C. (414 F.), and has the composition $C_{10}H_{20}O$. It is contained in large quantities in Japanese oil of Peppermint.

Soluble in Rectified Spirit and Ether.

Is reported to be useful in neuralgia and toothache as an application, dissolved in spirit.

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# MEZEREI CORTEX.

## MEZEREON BARK.

The dried bark of *Daphne Mezereum*, Mezereon; or *Daphne Laureola*, Spurge Laurel.

*Medicinal Properties.*

A stimulant, acting on the kidneys. Rarely used alone. With Sarsaparilla it is employed as a sudorific and alterative in venereal, rheumatic, scrofulous, and chronic cutaneous diseases. Applied to the skin, it produces inflammation and vesication, though slow in action.

The bark soaked in hot vinegar-and-water is applied with a compress to produce a blister: ointment of the bark is used to keep issues or blisters open.

Contained in Decoctum Sarsæ Compositum.

(In all the Pharmacopœias except Austr.; Fr. Mézéréon ou bois gentil.)

### Preparation.

**EXTRACTUM MEZEREI ÆTHEREUM.** Intense green.

Mezereon Bark, cut small, 1 lb.; Rectified Spirit, 8 pints; Ether, 1 pint: macerate the Mezereon in six pints of the spirit for three days with frequent agitation, strain and press. To the residue of the Mezereon, add the remainder of the Spirit, and again macerate for three days, with frequent agitation, strain and press, mix and filter the strained liquors; recover the greater part of the Spirit by distillation, evaporate what remains to the consistence of a soft extract, put this into a stoppered bottle with the Ether, and macerate for twenty-four hours, shaking them frequently, decant the ethereal solution, recover part of the Ether by distillation, and evaporate what remains to the consistence of a soft extract.

Used in preparing Linimentum Sinapis Compositum; 8 grs. are contained in 1 oz.

(Belg. Ext. Mezerei Æthereum, with Ether only; Fr. Extrait Éthéré de Garou (from the *Daphne Gnidium*), Dan. Ger. and Russ. with Spirit only; U.S. fluid Extract with Alcohol 1 in 1; not in Austr.)

Not Official.

### Unguentum Mezerei.

Belg. Cortex Mezerei, 4; Lard, 8; Yellow Wax, 2.
Also, Ext. Mezerei, Æther, 1; Simple Ointment, 20.
Fr. Ext. Mezerei, Æther, 4; Lard, 90; White Wax, 10; Alcohol, 9.
Ger. Ext. Mezerei, 1; Wax Ointment, 9.
Russ. Ext. Mezerei, 1; Washed Lard, 9.
U.S. Fluid Extract of Mezereon, 18; Lard, 72; Yellow Wax, 10.

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## MICA PANIS.

SOFT CRUMB OF BREAD.

Contained in Cataplasma Carbonis.

Not Official.

Cataplasma Micæ Panis.—Grated Crumb of Bread and boiling water *q.s.*

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## MISTURÆ.

MIXTURES.

The following are the mixtures of the British Pharmacopœia:—

| Dose. | | Proportions. |
|---|---|---|
| ½ to 1 oz. | MISTURA AMMONIACI . . . . . . . | about 13 grs. in 1 oz. |
| 1 to 2 oz. | MISTURA AMYGDALÆ. | |
| 1 to 2 oz. | MISTURA CREASOTI . . . . . . . . . . | 1 minim in 1 oz. |
| 1 to 2 oz. | MISTURA CRETÆ . . . . . . . . . | about 13 grs. in 1 oz. |
| 1 to 2 oz. | MISTURA FERRI AROMATICA. | |
| 1 to 2 oz. | MISTURA FERRI COMPOSITA . . . . . . . | 2½ grs. in 1 oz. |
| ½ to 1 oz. | MISTURA GENTIANÆ (Scotch Infusion). | |
| ½ to 2 oz. | MISTURA GUAIACI . . . . . . . . . | about 11 grs. in 1 oz. |

| Dose | | Proportions. |
|---|---|---|
| ½ to 2 oz.<br>for a child | MISTURA SCAMMONII . . . . . . . . . . . | 2 grs. in 1 oz. |
| 1 to 1½ oz. | MISTURA SENNÆ COMPOSITA . . | 1 oz. Magn. Sulph. in 5 ozs. |
| 1 to 2 oz. | MISTURA SPIRITUS VINI GALLICI . . | about 1 Brandy in 2½. |

# MORI SUCCUS.

## MULBERRY JUICE.

The deep purple juice of the ripe fruit of *Morus nigra.*

### *Medicinal Properties.*

Refreshing and laxative; serves to prepare a grateful drink well adapted to febrile cases.

(Fr. Mûrier Noir.)

### Preparation.

**SYRUPUS MORI.** Deep lake colour.

Mulberry Juice, 20; Refined Sugar, 32; Rectified Spirit, 2½: heat the juice to the boiling-point, and when it has cooled filter it; dissolve the Sugar in the filtered liquid by a gentle heat, and add the spirit; the product should weigh 54. Sp. g. 1·330.

*Dose.*—1 to 2 drms.

(Same as Austr. Belg. Dan. and Fr. (Sirop de Mûres); not in others.)

An agreeable addition to a gargle for sore throat. Used as a colouring matter for draughts, 1 drm. to 1 oz.

# MORPHIÆ ACETAS.

## ACETATE OF MORPHIA.

$C_{17}H_{19}NO_3 . C_2H_4O_2$, eq. 345.

A white powder. Part of its Acetic Acid is sometimes driven off in drying.

The formula should be $C_{17}H_{19}NO_3 . C_2H_4O_2 . 3H_2O$.—*Ph. Jl.* Jan. 1881, p. 620.

Solubility: 1 in 6 of Water, 1 in 100 of Rectified Spirit.

*Dose.*—⅛ to ½ a grain.

(Belg. Dan. Ger. Russ. and U.S.; not in Austr. and Fr.)

**INJECTIO MORPHIÆ HYPODERMICA.**

A solution of acetate of morphia containing one grain of the acetate in twelve minims of the injection.

Hydrochlorate of Morphia, 88 grs.; Solution of Ammonia, Acetic Acid, Distilled Water, of each a sufficiency.

Dissolve the Hydrochlorate of Morphia in two ounces of distilled water, aiding the solution by a gentle heat; then add Solution of Ammonia so as to precipitate the Morphia, and render the liquid slightly alkaline; allow it to cool; collect the precipitate on a filter, wash it with distilled water, and allow it to drain; then transfer the Morphia to a small porcelain dish with about an ounce of distilled water, apply a gentle heat, and carefully add acetic acid until the Morphia is dissolved, and a very slightly acid solution is formed. Add now sufficient distilled water to make the solution measure exactly two fluid ounces. Filter and preserve the product in a stoppered bottle excluded from the light.

*Tests.*—Very slightly acid to test-paper. A fluid drachm of it, rendered slightly alkaline by the addition of solution of ammonia, yields a precipitate of morphia which, after being washed and dried, should weigh 4·3 grains, corresponding to 5 grains of acetate of morphia.

*Dose.*—By subcutaneous injection 1 to 6 mins.

**LIQUOR MORPHIÆ ACETATIS.** Colourless.

Acetate of Morphia, 4 grs.; Diluted Acetic Acid, 8 minims; Rectified Spirit, 2 drms.; Distilled Water, 6 drms.: dissolve the Acetate in the mixed liquids. =(1 in 123).

Each fluid drm. contains ½ grain.

*Dose.*—10 to 60 minims.

Not Official.

Solution of Acetate of Morphia for Hypodermic injection, which has been long used, and is double the strength of the Pharmacopœia.

1 grain of the Acetate of Morphia in every 6 minims of the solution, which should be neutral.

*Dose.*—1 to 3 minims for each injection.

Sulphate of Atropia combined with it, increases its calming effect, whilst it lessens its constipating effect.

Acetate of Morphia, 10 grs.; Sulphate of Atropia, ¼ gr.; Water, 60 minims: dissolve.

½ a grain of Acetate of Morphia and $\frac{1}{80}$th of a grain of Sulphate of Atropia in every 3 mins.

*Dose.*—1 to 3 minims for each injection.

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## MORPHIÆ HYDROCHLORAS.

HYDROCHLORATE OF MORPHIA.

*Syn.* Muriate of Morphia.

$C_{17}H_{19}NO_3$. HCl. $3H_2O$, eq. 375·5.

Prepared from Opium.

In white, flexible, acicular prisms of a silky lustre.

Solubility: 1 in 20 of Water, 1 in 90 of Rectified Spirit.

*Tests.*—Its aqueous solution gives a white curdy precipitate with Nitrate of Silver (Chloride), and a white one with Potash (Morphia), which is redissolved when an excess of the alkali is added. Entirely destructible by heat, leaving no residue. 20 grains of the Salt, dissolved in half an ounce of warm water, with Ammonia added in the slightest possible excess, give, on cooling, a crystalline precipitate, which, when washed with a little cold water and dried by exposure to the air, weighs 15·18 grains—pure Morphia.

As pure Morphia is insoluble in Water, it is rarely used in medicine; the Salts only are used.

Of these, the Pharmacopœia has selected the Acetate and the Hydrochlorate.

The following may be reckoned as therapeutical equivalents:—

1 gr. Hydrochl. Morph. = 8 grs. Opium = 7 grs. Powd. Opium = 4 grs. Ext. Opium = 93 minims Tinct. Opium.

(In all the Pharmacopœias except Dan.; Fr. Chlorhydrate de Morphine.)

### *Medicinal Properties.*

Hydrochlorate of Morphia possesses the anodyne and soporific powers of Opium, yet it acts more agreeably, being less likely to produce headache and nausea. It is also less exciting and stimulating than Opium.

*Has no appreciable effect on the secretion of bile, and does not prevent the stimulating effect of such a substance as the Salicylate of Soda.—Dr. Rutherford.*

*Dose.*—$\frac{1}{8}$ to $\frac{1}{2}$ gr.

INCOMPATIBLES.—Alkalies and Alkaline Earths, astringent vegetable Infusions and Decoctions.

ANTIDOTES.—$\frac{1}{32}$ gr. Strychnia acts as an antidote to $\frac{1}{2}$ gr. of Morphia.—*Lancet*, Dec. 9, 1871.

## Preparations.

**LIQUOR MORPHIÆ HYDROCHLORATIS.** Colourless.

Hydrochlorate of Morphia, 4 grs.; Diluted Hydrochloric Acid, 8 minims; Rectified Spirit, 2 drms.; Distilled Water, 6 drms.: dissolve. =(1 in 123).

Each fluid drachm contains about half a grain.

(Not in other Pharmacopœias.)

*Dose.*—10 to 60 minims.

A Solution for Hypodermic injection cannot be made (cold) stronger than 1 in 20. If a stronger solution is used, it must be injected whilst warm; the solution of the Acetate therefore is more convenient.

**SUPPOSITORIA MORPHIÆ.** Cream Colour.

Hydrochlorate of Morphia, 6 grs.; Oil of Theobroma, 90 grs.; Benzoated Lard, 64 grs.; White Wax, 20 grs.: melt the Wax and Oil of Theobroma with a gentle heat, then add the Hydrochlorate of Morphia and Benzoated Lard previously rubbed together in a mortar, and mix all the ingredients thoroughly; pour the mixture while it is fluid into suitable moulds of the capacity of 15 grains, or the fluid mixture may be allowed to cool, and then be divided into twelve equal parts, each of which should be made into a conical form.

Each suppository contains $\frac{1}{2}$ grain of Hydrochlorate of Morphia.

(U.S. $\frac{1}{2}$ grain Sulphate of Morphia in each; not in other Pharmacopœias.)

**SUPPOSITORIA MORPHIÆ CUM SAPONE.**

Hydrochlorate of Morphia, 6 grs.; Glycerine of Starch, 50 grs.; Curd Soap, in powder, 100 grs.; Starch, in powder, a sufficiency.

Mix the Hydrochlorate of Morphia with the Glycerine of Starch and soap, and add sufficient starch to form a paste of suitable consistence. Divide the mass into twelve equal parts, each of which is to be made into a conical or other convenient form for a suppository.

Each suppository contains ½ grain.

**TROCHISCI MORPHIÆ.** White.

Hydrochlorate of Morphia, 20 grs.; Tincture of Tolu, ½ oz.; Refined Sugar, in powder, 24 oz.; Gum Acacia, in powder, 1 oz. Mucilage of Gum Acacia, 2 oz., or a sufficiency; Distilled Water, ½ oz.: divide the mass into 720 lozenges.

Each lozenge contains $\frac{1}{36}$ gr. of Hydrochlorate of Morphia.

*Dose.*—One or two occasionally for cough.

**TROCHISCI MORPHIÆ ET IPECACUANHÆ.** Cream colour.

Hydrochlorate of Morphia, 20 grs.; Ipecacuanha, in fine powder, 60 grs.; Tincture of Tolu, ½ oz.; Refined Sugar, in powder, 24 oz.; Gum Acacia, in powder, 1 oz.; Mucilage of Gum Acacia, 2 oz., or a sufficiency; Distilled Water, ½ oz.: divide the mass into 720 lozenges.

Each lozenge contains $\frac{1}{36}$ gr. of Hydrochlorate of Morphia, and $\frac{1}{12}$ gr. of Ipecacuanha.

*Dose.*—One or two occasionally for cough.

Not Official.

## MORPHIÆ OLEAS.

Oleate of Morphia consists of 1 gr. of pure Morphia dissolved in 60 grs. of Oleic Acid.

Not Official.

## MORPHIÆ SULPHAS.

White acicular crystals.

Solubility 1 in 16 of Water; sparingly in Rectified Spirit.

(Belg. Fr. Ger. and U.S.; not in Austr. Dan. and Russ.)

Not Official.

## MORPHIÆ TARTRAS.

A white powder.

Solubility 1 in 16 of Water; sparingly in Rectified Spirit.

# MORRHUÆ OLEUM.

## COD-LIVER OIL.

The Oil extracted from the fresh liver of the Cod *Gadus morrhua* by a steam-heat or water bath not exceeding 180°. Slightly yellow.

Sp. g. from 0·915 to 0.929.

(Austr. Belg. Dan. Ger. and Russ. Ol. Jocoris Aselli; Fr. Huile de Foie de Morue; U.S. Oleum Morrhuæ.)

Solvent of pure Quinia. 1 oz. at 140° F. will dissolve 4 grains readily.

### *Medicinal Properties.*

Demulcent and nutrient. Most efficient in scrofulous diseases, glandular swellings, diseases of the joints, tabes mesenterica, rickets, and chronic rheumatism: and generally in all chronic cases of impaired digestion, assimilation, and nutrition. In pulmonary consumption it deservedly possesses a high reputation.

*Dose.*—Brit. Ph. dose, 1 to 8 drms. 1 to 4 drms., on Orange Juice, water, or a mixture of Tincture of Orange with Nitric Acid and Syrup; or 2 drms. rubbed with 30 grs. of Powdered Acacia and 1½ drms. of Distilled Water till an emulsion is formed, and then gradually add, with constant trituration, 1 oz. of Peppermint Water, forms a nice emulsion.

Cod-Liver Oil has engaged much attention amongst Pharmaceutists. The Yearbooks of Pharmacy are full of suggestions how to render it palatable; one author finishes up with a triumph, that the particles of Oil struggle in vain for re-union.

The following formula makes a good Emulsion:—

| | |
|---|---|
| Powder of Tragacanth | 27 grs. |
| Rubbed into a paste by first adding | |
| Syrup | ¼ oz. |
| And then Water | 1½ oz. |
| Rub these into a good mucilage, and add by a thin stream | |
| Cod-Liver Oil | 2½ oz. |
| These being well incorporated, add gradually | |
| Distilled Water | 2½ oz. |
| And lastly Essence of Lemon | 12 minims. |
| Essential Oil of Almonds | 1 minim. |

Previously dissolved in ¾ oz. of Rectified Spirit.

The excellency of the Emulsion is in proportion to the diligence of the operator in using his pestle and mortar.

Pancreatized Cod-Liver Oil is prescribed under the impression that it is more easily digested than Cod-Liver Oil alone.

## MOSCHUS.

### MUSK.

The inspissated and dried secretion from the preputial follicles of *Moschus moschiferus*, a native of the mountainous regions of Central Asia; imported from China and India.

In grains or lumps concreted together, soft and unctuous to the touch, of a reddish-brown colour, having a strong and peculiar odour; contained in an oval sac or membrane about two inches in diameter.

Ether is a good solvent of Musk.

(In all the Pharmacopœias except Austr.; Fr. Musc.)

### *Medicinal Properties.*

Stimulant and antispasmodic, increasing the vigour of the circulation without materially affecting the cerebral functions. It may be given in almost all spasmodic diseases, particularly in cases of great prostration with intense nervous excitement.

*Dose.*—5 to 10 grs. in pill or mixture.

Not Official.

**Mistura.**—Musk, 3; Acacia, 3; Sugar, 3; Rose Water, 160; triturate the Musk with the Sugar, then with the Acacia; add the Rose Water gradually.

*Dose.*—1 to 2 oz.

**Tinctura.**—Musk, 60 grs.; Rectified Spirit 10 oz.: digest seven days, and strain.

(Ger. and Russ. Musk 1, Diluted Spirit, 25; Water, 25.) =(1 in 73).

## MUCILAGINES.

### MUCILAGES.

Mucilages are employed more as vehicles than as remedies. Mucilage of Acacia is sometimes given to relieve irritating cough, but more generally to render Oils and solutions of Resins miscible with Water; *see* Acacia. M. Amyli, for Enemas; M. Tragacanthæ, for Lozenges, and also for suspending heavy powders in mixtures, in preference to M. Acaciæ.

The Mucilages are:—

MUCILAGO ACACIÆ.
MUCILAGO AMYLI.
MUCILAGO TRAGACANTHÆ.

Not Official.

## MUCUNA.

Hairs of the Mucuna Pruriens, 1 drm.; Syrup of Orange, 1 oz.: mix.

A dessert-spoonful taken three times a day, and a purge in the morning after, effectually expel the round or lumbrical worm.

Not Official.

## MUDAR.

### THE BARK OF THE ROOT OF CALOTROPIS GIGANTEA.

Diaphoretic; it calms the mucous lining of the intestines, and is effective in dysentery.

*Dose.*—Of the powder, 15 grs. 3 or 4 times a day.

## MYRISTICA.

### NUTMEG.

The kernel of the seed of *Myristica officinalis*, cultivated in the Banda Islands of the Malayan Archipelago, imported from Sumatra and the Molucca Islands.

### *Medicinal Properties.*

Aromatic, stimulant, and carminative. Chiefly used to cover the taste of rhubarb and other medicines.

*Dose.*—5 to 15 grs.

(Austr. Belg. Nux Moschata; Fr. Muscadier cultivé; Dan. Ger. and Russ. Semen Myristicæ; U.S. Myristica.)

Contained in Pulvis Catechu Compositus, Pulvis Cretæ Aromaticus, Spiritus Armoraciæ Compositus, Tinctura Lavandulæ Composita.

## Preparations.

**OLEUM MYRISTICÆ.** Colourless. Very fragrant.

The oil distilled in Britain from Nutmeg. This injunction of the British Pharmacopœia is necessary, the foreign oil being very much inferior to that distilled in Britain.

*Dose.*—2 to 6 minims on Sugar, or in emulsion.

(U.S.; Austr. Ger. and Russ. Oleum Macidis; Belg. Oleum Macidis Æthereum; Dan. Ætheroleum Macidis; not in Fr.)

Contained in Sp. Ammon. Aromat. and Pilula Aloes Socotrinæ.

**OLEUM MYRISTICÆ EXPRESSUM.** EXPRESSED OIL OF NUTMEGS. *Syn.* OIL OF MACE.

A concrete oil, of a firm consistence and orange colour, obtained from Nutmeg by expression and heat.

(Austr. Belg. Ol. Nucis Moschatæ; Fr. Beurre de Muscade; Ger. Ol. Myristicæ; Russ. Ol. Myristicæ Expressum; not in Dan. and U.S.)

Contained in Emplastrum Calefaciens and Emplastrum Picis.

**SPIRITUS MYRISTICÆ.** Colourless.

Volatile Oil of Nutmeg, 1; Rectified Spirit, 49: dissolve.
=(1 in 50).

*Dose.*—30 to 60 minims.

(U.S. about the same as Brit.; not in others.)

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# MYRRHA.

## MYRRH.

A gum-resinous exudation from the stem of *Balsamodendron Myrrha*, collected in Arabia Felix and Abyssinia.

In irregular-shaped masses, of a reddish-yellow or reddish-brown colour.

Solubility: partially in Water, more soluble in Alcohol and Ether.

(In all the Pharmacopœias.)

### *Medicinal Properties.*

A stimulant tonic. Useful in humid asthma and chronic catarrh;

also in chlorosis and defective menstruation. Externally to aphthous sore mouths and diseased gums.

*Dose.*—10 to 30 grs.

Contained in Decoctum Aloes Compositum, Mistura Ferri Composita, Pilula Aloes et Myrrhæ, Pil. Assafœtidæ Composita, Pilula Rhei Composita.

### Preparation.

**TINCTURA MYRRHÆ.** Light reddish-brown.

Myrrh, in coarse powder, 1; Rectified Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, and when it ceases to drop pour on the remaining spirit, press the marc, filter, and add Rectified Spirit to make 8. =(1 in 8).

*Dose.*—½ to 1 drm. More frequently mixed with water to form a gargle.

(Austr. Dan. Fr. Ger. and Russ. 1 and 5; Belg. 1 in 5; U.S. 1 and 8·4; all by weight.)

Not Official.

GARGARISMA MYRRHÆ.—Tincture of Myrrh, 1; Honey, 1; Infusion of Roses, 18: mix.

TINCTURE OF MYRRH AND BORAX.—*See* BORAX.

## NECTANDRÆ CORTEX.

BEBEERU BARK.

The bark of *Nectandra Rodiæi*, Greenheart Tree, imported from British Guiana.

The bark is intensely bitter, and contains an alkaloid, Beberia ($C_{18}H_{21}NO_3$), which is identical with Buxine, the alkaloid of *Buxus sempervirens*, and Pelosine, obtained from *Cissampelos Pareira*.

(U.S.)

Sulphate of Beberia of Brit. Pharm. is a mixed substance.

*Medicinal Properties.*

Tonic and antiperiodic. Used in remittent and intermittent fevers, though not to be relied on as a substitute for the Sulphate of Quinia.

### Preparation.

**BEBERIÆ SULPHAS.** *See* BEBERIÆ SULPHAS.

Not Official.

## NICKEL.

SULPHATE OF NICKEL.—Greenish-blue crystals.

Given in Chlorosis.

*Dose.*—½ to 1 gr. two or three times a day; is best given on a full stomach, as on an empty one it is apt to produce nausea.

Not Official.

## NITRO-GLYCERINE.

A solution in Spirit (1 in 100) one minim for a dose on sugar or in a little water every three hours, has been given with success in severe cases of angina pectoris (Ringer).

The dose can be increased to 5 and even 8 Minims.—*Brit. Med. Journal*, April 10, 1880, p. 556.

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# NUX VOMICA.

## NUX VOMICA.

The seeds of *Strychnos Nux-vomica*, imported from the East Indies.

### *Medicinal Properties.*

In very small doses, tonic, and laxative by stimulating the muscular coat of the bowel. In larger doses it operates on the whole system through the spinal motor nerves, indicated by involuntary muscular contractions. Useful in palsy and all paralytic affections, and in cases of feeble contractile powers. It is recommended in chorea and atonic dropsy, and in debilitated conditions of the alimentary canal, also in hay fever. The extract and tincture are the preparations generally prescribed.

*Dose.*—Of the powder, 1 to 3 grs.

(In all the Pharmacopœias; Fr. Noix Vomique; Ger. Semen Strychni.)

ANTIDOTES.—In case of poisoning by Nux Vomica, Tobacco seems to be the best antidote. Enema Tabaci should be administered. Infusion of Tobacco, ½ oz. to 20 ozs. of boiling water, may be given in divided doses till the spasms abate, and then discontinue its use. Nicotina, if at hand, in the dose of one drop, in some warm sherry and water.

### Preparations.

**STRYCHNIA.** *See* STRYCHNIA.

**EXTRACTUM NUCIS VOMICÆ.** Light brown.

Soften Nux Vomica by steam, dry rapidly, and reduce to fine powder; boil with Rectified Spirit until exhausted, strain, distil off the spirit, and evaporate to the consistence of a soft extract.

16 oz. seeds yield 1 oz. Alcoholic extract.

*Dose.*—⅓ to 1 gr.; Brit. Pharm. ½ to 2 grs. Often with Aloes and Ipecacuanha.

(Austr. Belg. Fr. and U.S. with cold Spirit; Ger. and Russ. have spirituous extract reduced to powder, and aqueous extract, also reduced to powder — they are named Extractum Strychni Spirituosum and Aquosum respectively; Dan. made with proof spirit (Temp. 50—60° C.) and reduced to powder.)

**TINCTURA NUCIS VOMICÆ.** Straw colour.

Nux Vomica, 1; Rectified Spirit, 10: soften the Nux Vomica by steam, dry rapidly, and reduce to fine powder. Macerate the powder forty-eight hours in three-fourths of the spirit, agitating occasionally, pack in a percolator, let it drain, pour on the remaining spirit, and when it ceases to drop, press, filter, and make up with Rectified Spirit to 10. =(1 in 10).

*Dose.*—10 to 30 minims.

(Austr. and Fr. (Teinture de Noix Vomique), 1 and 5; Belg. 1 in 5; Dan. 1 and 10; Ger. and Russ. Tinct. Strychni, 1 and 5 (also Tinct. Strychni Etherea 1 and 10 of Spirit of Ether); U.S. 1 and 3 nearly; all by weight.)

¼ oz. of Extract, dissolved in 40 ozs. of Rectified Spirit, is about equal in strength to the Tincture.

Not Official.

St. Ignatius's Bean.—The seeds of the *Ignatia amara*, from the Philippine Islands. They contain the same constituents as Nux Vomica, and afford about 1·2 per cent. of Strychnia.

An Alcoholic Extract is made of this in the same manner as that of Nux Vomica.

Chiefly used in cases of debility of the digestive organs, and in all instances where Nux Vomica is employed.

*Dose.*—¼ to 1 gr. in pill three times a day.

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# OLEA.

## OILS.

The Oils ordered in the Pharmacopœia consist of expressed and distilled oils: viz. the expressed are those of the Almond and the Olive, which are chiefly used for ointments and liniments; Castor Oil, used in Collodion Flexile, Linimentum Sinapis Compositum, and Pilula Hydrargyri Subchloridi; Croton Oil is used for Linimentum Crotonis; Linseed Oil, not used for preparations; we have also the expressed oil from the Lemon-rind, and that of the Theobroma; also the expressed oil of Nutmegs, which is used in Emplastrum Calefaciens and Emplastrum Picis. All the other oils are obtained by distillation.

The following are the Oils of the British Pharmacopœia, and will be found under the names of the substances from which they are derived:—

100 parts of the material, according to Messrs. Herring, yield on an average—

| | | |
|---|---|---|
| OLEUM AMYGDALÆ. | Expressed from the seed | 42 |
| OLEUM ANETHI. | Distilled from the fruit | 2·8 to 3 |
| OLEUM ANISI. | Distilled from the fruit and imported | 2 |
| OLEUM ANTHEMIDIS. | Distilled from the flowers | 0·75 |
| OLEUM CAJUPUTI. | Distilled from the leaves and imported. | |
| OLEUM CARUI. | Distilled from the fruit | 5 |
| OLEUM CARYOPHYLLI. | Distilled from the flower-bud | 16 |
| OLEUM CINNAMOMI. | Distilled from the bark. | |
| OLEUM COPAIBÆ. | Distilled from the oleo-resin | 35 to 45 |
| OLEUM CORIANDRI. | Distilled from the fruit | 0·6 |
| OLEUM CROTONIS. | Expressed from the seeds | 25 |
| OLEUM CUBEBÆ. | Distilled from the unripe fruit | 11 |
| OLEUM JUNIPERI. | Distilled from the unripe fruit | 0·8 |
| OLEUM LAVANDULÆ. | Distilled from the flowers | 1·5 |
| OLEUM LIMONIS. | Expressed or distilled from the fresh peel. | |
| OLEUM LINI. | Expressed from the seeds without heat. | |
| OLEUM MENTHÆ PIPERITÆ. | Distilled from the fresh herb. | |

| | |
|---|---|
| OLEUM MENTHÆ VIRIDIS. Distilled from the fresh herb. | |
| OLEUM MORRHUÆ. Extracted from the fresh liver by heat | 42 |
| OLEUM MYRISTICÆ. Distilled from the seed kernel | 5·5 |
| OLEUM MYRISTICÆ EXPRESSUM. Expressed from the seed with heat | 13 |
| OLEUM OLIVÆ. Expressed from the ripe fruit and imported. | |
| OLEUM PHOSPHORATUM. | |
| OLEUM PIMENTÆ. Distilled from the unripe berry | 4 |
| OLEUM RICINI. Expressed from the seeds and imported. | |
| OLEUM ROSMARINI. Distilled from the flowering tops | 0·5 |
| OLEUM RUTÆ. Distilled from the fresh herb. | |
| OLEUM SABINÆ. Distilled from fresh Savin. | |
| OLEUM SINAPIS. Distilled with water from the seeds of Black Mustard after the expression of the fixed oil. | |
| OLEUM TEREBINTHINÆ. Distilled from Turpentine and imported. | |
| OLEUM THEOBROMÆ. Expressed with heat from the seeds of *Theobroma Cacao* | 25 |

Not Official.

| | |
|---|---|
| OLEUM CALAMI AROMATICI | 1 |
| OLEUM CARDAMOMI | 3 |
| OLEUM CASCARILLÆ | 0·6 |
| OLEUM CUMINI | 2·5 |
| OLEUM SANTALIS FLAV. 2 to 4, sometimes | 4½ |
| OLEUM STAPHISAGRIÆ | 16 |

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Not Official.

### OLEIC ACID.

A yellow oily liquid which congeals to a whitish crystalline mass at 39° F., and fuses again at 57° F. Equal volumes of Oleic Acid and Rectified Spirit (sp. g. ·830) heated to 77° F. should give a clear solution without separation of oily drops on the surface. Mr. C. Rice proposed that the commercial Oleic Acid should be cooled to 40° F. and the liquid portion expressed. Oleic Acid dissolves precipitated Oxide of Mercury, Oxide of Lead, Oxide of Zinc, and the alkaloids Morphia, Atropia, and Aconitia.

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## OLIVÆ OLEUM.

OLIVE OIL.

The Oil expressed in the south of Europe from the ripe fruit of *Olea Europæa*. Yellow.

Sp. g. about 0·915 ; congeals partially at about 36° F.

Solubility: 1 in 2 of Ether; partially in Rectified Spirit.

(In all the Pharmacopœias.)

*Medicinal Properties.*

Nutritious and mildly laxative, demulcent, in the form of emulsion. Has also been successfully given for ascarides, followed by a purge. Used in laxative enemata. It is most extensively employed in pharmacy, in the preparation of liniments, ointments, and plasters.

*Dose.*—½ to 1 oz.

Contained in Enema Magnesiæ Sulphatis, Linimentum Ammoniæ, Linimentum Calcis, Linimentum Camphoræ, Cataplasma Lini, Emplastra and Unguenta.

## OPIUM.

### OPIUM.

The juice inspissated by spontaneous evaporation, obtained by incision from the unripe capsules of *Papaver somniferum*, grown in Asia Minor.

Opium is derived almost exclusively from the *Papaver somniferum*. This plant was cultivated by the early Greeks, and is at present grown for its Opium, in India, Persia, Egypt, and Asiatic Turkey. In France and Germany, it is cultivated more for the sake of its seed, and in England for its capsules. The process of wounding the capsules and collecting the opium has continued the same for the last 1800 years.* Smyrna Opium, and also that of Constantinople, are employed in this country. Specimens of Persian Opium in fingers, of Patna in squares, of Benares in balls covered with skin, and Egyptian in flat pieces like that of Constantinople, are to be found in several museums. Good Smyrna Opium yields, according to Mulder, from 9 to 11 per cent. of Morphia, together with Codeia, Narcotina, Papaverin, Paramorphia (Thebaica), Narcein, Meconin, Meconic Acid, Opianine, besides extractive and fatty matters.

MORPHIA.—Discovered by Sertuener. Crystallizes in nearly white, flat, six-sided prisms, alkaline in reaction, soluble in alcohol, *soluble without decomposition in solution of Potash, insoluble* in Water or Ether, forming crystallizable salts with acids. It is coloured red by Nitric Acid, and blue by Perchloride of Iron. Intensely bitter.

CODEIA.—Discovered by Robiquet, in 1832. It crystallizes in white octahedrons, alkaline in reaction. Soluble in Water, Ether, and Alcohol; *insoluble in solution of Potash.* It does not become blue with Persalts of Iron. It exists in Opium, combined with Meconic Acid, like Morphia, and in the preparation of the Muriate of Morphia is extracted with it. From the mixed solution, Morphia is thrown down by Ammonia, when the Codeia is left in solution, and may be obtained by evaporation; it is redissolved in hot Ether, which on evaporation leaves the Codeia. It forms crystalline salts with acids. It has been said that its therapeutic action is like that of Morphia. Dr. Gregory took 3 grains without any effect, and he found that a larger dose did not procure sleep. It has been given in diabetes with benefit (an entire abstinence of starchy food being strictly observed), in doses of 1 gr. three times a day, rising gradually to 2 grs.; larger doses than this should be given with great caution. For Syrupus Codeiæ, see p. 229.

NARCOTINA.—First noticed by Derosne, in 1803. In thin pearly tables. It is neutral. Insoluble in Water; soluble in Ether, in boiling Alcohol, in diluted acids; *insoluble in solution of Potash.* Forms a yellow solution with Nitric Acid. It has no narcotic properties, and has therefore been called Anarcotina; it has been given in 5-grain doses as a substitute for Quinia.

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* An interesting account of this process is given by Mr. Maltass, in the *Pharmaceutical Journal*, February, 1855.

PAPAVERIN.—Discovered by Dr. Merck. In white crystalline needles. Insoluble in Water; sparingly soluble in Alcohol and Ether. Moistened with strong Sulphuric Acid, it becomes dark blue.

PARAMORPHIA (Thebaica).—Discovered by Pelletier. In white crystalline needles. Soluble in Water, in Alcohol, 1 in 10, and in Ether. Unites with acids. Not reddened by Nitric Acid, nor rendered blue by Persalts of Iron. In doses of 1 grain it produces tetanic spasms.

NARCEIN.—Discovered by Pelletier, in 1832. In white, silky, acicular crystals: neutral, with a slightly bitter taste. Soluble in 375 parts of cold and in 220 of hot Water, also in Alcohol; insoluble in Ether. It forms a bluish colour with Iodine, which is destroyed by heat; but it is not reddened by Nitric Acid. The diluted mineral acids impart to this substance a fine light blue colour, which disappears on the further addition of water. It is supposed to be inert.

MECONIN was discovered by Couerbe. It forms white acicular crystals, is a neutral body, and dissolves in 265 parts of cold and in 18 of boiling Water. Very soluble in Ether, Alcohol, and the essential oils.

MECONIC ACID.—In white, crystalline, pearly scales. Soluble in 4 parts of boiling Water, also in cold Water and Alcohol. Persalts of Iron render it blood-red. The Salts of Lead, Silver, and Barium give white precipitates, which are soluble in Nitric Acid. Therapeutically, Meconic Acid has of itself little or no action on the system, but combined with Morphia, it forms the natural salt of Opium, and has a more calming effect than any of the artificial salts of Morphia.

OPIANINE, or OPIANIC ACID.—Discovered by Dr. Hinterberger. Occurs in long, colourless, prismatic crystals. Insoluble in Water, and sparingly soluble in boiling Alcohol, from which it entirely separates on cooling. Strong Sulphuric Acid dissolves without changing it; Nitric Acid colours it yellow, and if added to its Sulphuric Acid solution, blood-red. It contains no Nitrogen.

CRYPTOPIA.—Discovered by T. and H. Smith, *Pharm. Journ.*, vol. viii. pp. 595, 716. With strong Sulphuric Acid it produces a deep blue colour.

APOMORPHIA.—A prompt and active emetic.

*Dose.*—$\frac{1}{10}$th gr. taken into the stomach operates in twenty minutes, but $\frac{1}{20}$th gr. injected subcutaneously produces vomiting in ten minutes.

Spurious Opium has from time to time found its way into the market; and some very similar in external appearance to the best Opium having been found on analysis to contain very little Morphia, the British Pharmacopœia has very properly given the following test:—

*Test.*—Take of Opium, 100 grains; Slaked Lime, 100 grains; Distilled Water, 4 ounces. Break down the Opium, and steep it in an ounce of the water for twenty-four hours, stirring the mixture frequently. Transfer it to a displacement apparatus, and pour on the remainder of the water in successive portions, so as to exhaust the Opium by percolation. To the infusion thus obtained, placed in a flask, add the Lime; boil for ten minutes, place the undissolved matter on a filter, and wash it with an ounce of boiling water. Acidulate the filtered fluid slightly with diluted Hydrochloric Acid; evaporate it to the bulk of half an ounce, and let it cool. Neutralize cautiously with Solution of Ammonia, carefully avoiding an excess; remove by filtration the brown matter which separates; wash it with an ounce of hot water; mix the washings with the filtrate; concentrate the whole to the bulk of half an ounce, and add now solution of Ammonia in slight excess. After twenty-four hours collect the precipitated Morphia on a weighed filter, wash it with cold water, and dry it at 212° F. It ought to weigh at least from 6 to 8 grains, and is pure Morphia.

Thus 1 grain of Opium yields 1/12 grain of Morphia.

The French Pharmacopœia states that soft Smyrna Opium should contain at least 10 per cent., and hard, 11 or 12 per cent. of Morphia.

14 of good Smyrna fresh from the chest, when dried, weigh 12, and the extract from it weighs 7.

**INCOMPATIBLES.**—The Alkaline Carbonates, Lime Water, Salts of Lead, Iron, Copper, Mercury, and Zinc, Liquor Arsenicalis, and all astringent Vegetables.

**ANTIDOTES.**—In case of poisoning by Opium, the antidotes are an emetic of 10 grs. of Sulphate of Copper, the stomach pump, external stimulants, cold affusion, Ammonia to the nostrils, compelled exertion, and artificial respiration. Belladonna is also recommended.

### *Medicinal Properties.*

Opium has three main physiological effects:—It diminishes pain (insensibility). It causes sleep. It arrests secretion, excepting that of the skin, which it promotes.

In small doses it excites the vascular and nervous systems, increasing the rapidity and fulness of the pulse; this is followed by sleep, accompanied with perspiration. It is apt to produce nausea, headache, thirst, and constipation. If the dose be large, the sleepiness becomes intense, and there is difficulty in waking the patient. By continued use, it impairs the appetite and digestion. It also acts on the respiratory system, diminishing the frequency of respirations, and thus impairing the oxidation of the blood.

*Dose.*—Of the powder, ½ to 2 grs. = 1/16 to ¼ gr. Hydrochlorate of Morphia.

When *small* pills of Opium are desired, 25 grains of powdered Opium with 1 minum of Syrup and 1 minim of water will form a nice pill mass.

(In all the Pharmacopœias.)

## Preparations.

**CONFECTIO OPII.** Very dark olive-brown.

Compound Powder of Opium, 192 grs.; Syrup, 1 oz.
=(1 of Powder of Opium in 40).

*Dose.*—5 to 20 grains.

Tablets of Confection of Opium are small hard cylinders, about one inch long, and weighing 20 grs. Are recommended to be taken for a "nightcap" in brandy and water.

**EMPLASTRUM OPII.** Brown.

Opium in very fine powder, 1; Resin Plaster, 9: melt the Resin Plaster by steam or water bath, add the Opium by degrees, and mix thoroughly. =(1 in 10).

Anodyne, to relieve local pain.

(U.S. Extract, 1 in 16; Belg. 1 in 20; Ger. 1 in 21·5; not in others.)

**ENEMA OPII.**

Tincture of Opium, ½ drm.; Mucilage of Starch, 2 ozs.: mix for one enema.

(Not in other Pharmacopœias.)

**EPTRACTUM OPII.** Rich deep brown.

Opium in thin slices, 16 ozs.; Distilled Water, 6 pints (120 ozs.): macerate the Opium in 2 pints (40 ozs.) of the Water twenty-four hours, and express the liquor. Reduce the residue of the Opium to a uniform pulp, macerate it again in 2 pints (40 ozs.) of the Water for twenty-four hours, and express. Repeat the operation a third time. Mix the liquors, strain through flannel, and evaporate by a water bath to a proper consistence for forming pills.

This is less stimulating than powdered Opium, and is preferred as a direct sedative.

100 of good Opium yield 50 of extract.

*Dose.*—½ to 1 gr. or more.

(In all the Pharmacopœias except Dan.)

**EXTRACTUM OPII LIQUIDUM.** Most intense brown.

Extract of Opium, 1; Distilled Water, 16; Rectified Spirit, 4; digest the Extract of Opium in the Water for an hour, stirring frequently; then add the Spirit and filter. The product should measure 20. =(1 oz. Ext. in 20 ozs.).

22 minims = 25 minims Tinct. Opii. (1 gr. in 22 minims).

*Dose.*—10 to 40 minims.

(Same strength as the Wine, and about one-seventh part stronger than the Tincture.)

Produces the effects of Opium, but with less derangement of the nervous system.

**LINIMENTUM OPII.** Black. Deposits a good deal when kept.

Tincture of Opium, 1; Liniment of Soap, 1: mix. =(1 in 2).

The addition of the Opium to the Soap Liniment renders it more useful in many cases of rheumatism and local pains.

(Fr. 1 of Tincture in 20. Not in the other Pharmacopœias.)

**PILULA SAPONIS COMPOSITA.** Light brown.

Opium, in fine powder, 1; Hard Soap, in powder, 4; Distilled Water, a sufficiency: mix the Soap with the Opium, and add Water sufficient to make a pill mass. =(1 Powder of Opium in 6, nearly).

Nearly 6 grains contain 1 grain of Powder of Opium.

Anodyne and soporific.

*Dose.*—3 to 5 grains.

(Same as U.S.; Belg. Pil. Opii Comp. about 1 in 8·5; Ger. Pil. Odontalgicæ, 1 in 5; not in others.)

**PULVIS OPII COMPOSITUS.** Light olive-brown.

Opium, 3; Black Pepper, 4; Ginger, 10; Caraway, 12; Tragacanth, 1; all in powder: mix. (The dry ingredients for making Confectio Opii.) =(1 of Powder of Opium in 10).

*Dose.*—2 to 5 gr.

**TINCTURA OPII.** Dark brown. (Laudanum.)

Opium, in coarse powder, 1½; Proof Spirit, 20: macerate seven days, strain, express, filter, and add spirit to make 20.

=(1 oz. in 13⅓ ozs.).

(1 gr. in 14⅔ minims).

25 minims = 22 minims Ext. Opii Liq., or 22 minims Vin. Opii.

A valuable anodyne and soporific, preferred to solid Opium when a more immediate effect is required.

*Dose.*—5 to 40 minims.

(Austr. Dan. Ger. and Russ. 1 in 10; U.S. 1 in 11; Belg. and Fr. with Extract, 1 in 12; all by weight. Fr. has also the Brit. Ph. formula.)

**TINCTURA OPII AMMONIATA.** Intense reddish-brown. Deposits much when kept.

Opium, in powder, 100 grs.; Saffron, cut small, 180 grs.; Benzoic Acid, 180 grs.; Oil of Anise, 60 minims; Strong Solution of Ammonia, 4 ozs.; Rectified Spirit, 16 ozs.: macerate seven days in a closed vessel, with occasional agitation, strain, and add sufficient Rectified Spirit to make up 20 ozs. =(1 Powdered Opium in 96 minims).

*Dose.*—½ to 1 drm.

THE SCOTCH PAREGORIC.—The Caustic Ammonia keeps the Morphia of the Opium n solution; the Carbonate of Ammonia would precipitate it.

**TROCHISCI OPII.** Deep brown.

Extract of Opium, 72 grs.; Tincture of Tolu, ½ oz.; Refined Sugar, in powder, 16 ozs.; Gum Acacia, in powder, 2 ozs.; Extract of Liquorice, 6 ozs.; Distilled Water, a sufficiency: divide the mass into 720 lozenges.

Each lozenge contains $\frac{1}{10}$th gr. of Extract of Opium.

*Dose.*—1 or 2 lozenges.

(U.S. Opium $\frac{1}{20}$th gr. in each; not in others.)

**VINUM OPII.** Deep brown. Deposits a good deal when kept.

Extract of Opium, 1 oz.; Cinnamon Bark, 75 grs.; Cloves, 75 grs.; Sherry Wine, 20 ozs.: macerate for seven days, with occasional agitation, and filter. =(1 oz. Extract in 20 ozs.).

22 minims = 1 gr. Extract.

*Dose.*—10 to 40 minims.

This is ¼ stronger than Vinum Opii, Brit. 1864, and also of the Edin. and Dub., and is about ⅓ weaker than Vin. Opii, Lond.; is stronger than Tinct. Opii, but is of the same strength as Extractum Opii Liquidum. If the Committee could but have left this preparation alone, and have made the Extractum Opii Liquidum of the same strength as the Vinum was, we should have had the Liquid Extract, the Tincture, and the Wine all of one strength, and the latter without the Aromatics. We must now keep the Brit. 1864 for the use of oculists, who object strongly to the Aromatics. The formula of the Brit. 1864 is as follows:—

Opium, in powder, 1½; Sherry, 20: macerate seven days, and filter.

= (1 powder in 13⅓).

*Dose.*—10 to 40 minims.

(Dan. both with and without aromatics, 1 of powder in 10; Fr. and U.S. 1 in 8 with aromatics; Belg. with aromatics, 1 *Extract* in 15, and without, 1 strained Opium in 12; Austr. Ger. and Russ., Tinct. Opii Crocata, 1 in 10; all by weight.)

| Other preparations containing Opium. | Proportions of Opium in the mass. |
|---|---|
| PILULA IPECACUANHÆ CUM SCILLA | 1 in 23. |
| PILULA PLUMBI CUM OPIO | 1 in 8. |
| PILULA SAPONIS COMPOSITA | 1 in 6, nearly. |
| PULVIS CRETÆ AROMATICUS CUM OPIO | 1 in 40. |
| PULVIS IPECACUANHÆ COMPOSITUS | 1 in 10. |
| PULVIS KINO COMPOSITUS | 1 in 20. |
| SUPPOSITORIUM PLUMBI COMPOSITUM | 1 gr. in each. |
| TINCTURA CAMPHORÆ COMPOSITA | ¼ gr. in fl. drm. |
| UNGUENTUM GALLÆ CUM OPIO | 1 in 14⅓. |

|  | Proportions of Morphia in the mass. |
|---|---|
| MORPHIÆ ACETATIS LIQUOR | 4 grs. in 1 fl. oz. |
| MORPHIÆ ACETATIS INJECTIO HYPODERMICA | 1 in 12. |
| MORPHIÆ HYDROCHLORATIS LIQUOR | 4 grs. in 1 fl. oz. |
| SUPPOSITORIUM MORPHIÆ | ½ gr. in each. |
| SUPPOSITORIUM MORPHIÆ C. SAPONE | ½ gr. in each. |
| TROCHISCI MORPHIÆ | $\frac{1}{36}$ gr. in each. |
| TROCHISCI MORPHIÆ ET IPECAC. | $\frac{1}{36}$, $\frac{1}{12}$, gr. in each. |

### Not Official.

Aqua Opii.—Dried Opium, 1; Water, 12: distil 6.

Employed in eye lotions where spirit is objectionable. Aq. Opii, 1: Aq. Sambuci, 7.

Unguentum Opii.—Soft extract of Opium, 1; simple ointment, 9: mix. = (1 in 10).

Solution of Bimeconate of Morphia.—Same strength and same dose as of Tincture of Opium. This was introduced into medicine by the Author in 1839; it possesses in an eminent degree the sedative powers of Morphia. Dr. Roots thus writes of it:—"I have taken it myself daily now very nearly four years, and during that period I have frequently prescribed it in my private practice. The result of my observations of its effects on myself and others amounts to this, namely, that it disturbs the head less, that it distresses the stomach less, and that it constipates the bowels less, than any other preparation of Opium. I have taken every other preparation of Opium, but from none of them have I obtained the same degree of quiet rest that I have enjoyed from this Bimeconate of Morphia."

The Author here records a case of a lady who had taken this preparation from 1841 to 1869, a period of twenty-eight years. The late Dr. Chambers and Mr. Benjamin Phillips attended her; they quite thought that she could not live three months, and they decided that full doses of this preparation should be tried. At length enormous doses were given, *a fluid ounce six times in the twenty-four hours.* The result of this was an entire cessation both of the hemorrhage from the lungs and the night perspirations, and she began to gain flesh. After some years the dose was diminished gradually till it amounted to 6 drms. twice in the twenty-four hours, and to this she strictly adhered up to the time above mentioned.

For Hypodermic injection, it is evaporated to one-twentieth of its volume, and then 3 minims are equal in power to ½ grain of Acetate of Morphia.

**Liquor Opii Sedativus** (Battley) has enjoyed a reputation for a long time as an anodyne and sedative superior to Tincture of Opium, but it is somewhat stronger, say, 50 per cent.; the dose was therefore 10 to 20 minims.

**Sydenham's Laudanum.**—A vinous preparation of Opium (Ger. Tinct. Opii Crocata). 8 minims are equal to 1 grain of Opium.

*Dose.*—10 to 20 minims.

**Black Drop.**—Originally prepared by John Cook, of Manchester. 1 drop is equal to 4 drops of Tincture of Opium.

*Dose.*—4 to 8 minims.

**Jeremie's Laudanum.**—Prepared by Savory and Moore. The same dose as Battley's.

**Nepenthe.**—Prepared by Ferris, of Bristol. Same dose as Tincture of Opium.

**Tinctura Thebaica.**—Extract of Opium, 4; Proof Spirit, 38 by weight: macerate and filter. In doses from 6 to 10 minims.

**Syrupus Codeiæ.**—Codeia, 6 grs.; Water, ½ oz.; Syrup, 8 ozs.: triturate the Codeia with the water, add the Syrup, and heat until solution takes place.

Used for cough.

*Dose.*—1 to 2 teaspoonfuls.

**Syrupus Morphiæ.**—Liquoris Morphiæ Hydrochloratis, 1 oz.; Syrup. Simplicis, 15 ozs.

Each fluid ounce contains ¼ gr. of the Salt.

*Dose.*—1 to 2 drms.

## OS USTUM.

BONE ASH.

The residue of bones which have been burned to a white ash in contact with air.

Used to prepare Calcis Phosphas and Sodæ Phosphas.

## OVI VITELLUS.

YOLK OF EGG.

The yolk of the egg of *Gallus Banckiva*, var. domesticus.

Contained in Mistura Spiritûs Vini Gallici.

## OXYMEL. *See* MEL.

## OXYMEL SCILLÆ. *See* SCILLA.

Not Official.

### PANCREATINE.

Baron Lucien Corvisart made some careful and elaborate experiments with this substance, and published them in 1857. He showed that when Pancreatine and Pepsine were digested together, the properties of both were destroyed.

If Corvisart's conclusions are correct, to introduce Pancreatine into the stomach would doubtless do harm to the digestive power of the stomach.

Pancreatine is not prescribed alone for the reason stated, but is combined with fat or oils, and when thus taken into the stomach does not interfere with the action of the gastric juice, but passes on to the Pancreas and relieves that organ from a portion of its work; besides that, Pancreate of fat, or Pancreatized Cod-Liver Oil, is thus rendered more fit for assimilation; in short, Pancreatized fat or oil does for the duodenum what Pepsine does for the stomach; each has its own properties. Pepsine will not digest fat; Pancreatine will not digest albumenoid substances or meat.

Dr. Dobell contends that the natural state of the Pancreatic Juice may be either *acid* or alkaline in its fresh state, although always acid soon after removal from the body, but that its acidity or alkalinity has nothing to do with its property of emulsifying fat.

## PANCREATIC EMULSION.

The process of making Purified Pancreatic Emulsion is divided into three parts. (See "Proceedings of the Royal Society," 1867.)

1. Make Crude Emulsion.
2. Convert the Crude Emulsion into Pancreatized Fat.
3. Make the Purified Emulsion out of the Pancreatized Fat.

1. To make CRUDE EMULSION:—

Fresh Pancreas of the pig freed from fat and all extraneous matter, 25 lbs.; Lard, 20 lbs.; Water, 3 gallons: bruise the Pancreas in a marble mortar, then add the lard, beat and mix well together, adding the water little by little as it becomes absorbed till 3 gallons are used. Strain by squeezing through muslin.

2. To make PANCREATIZED FAT:—

Treat the Crude Emulsion with Ether, in the proportion of three parts of Ether to one of Emulsion. Mix well, and allow the mixture to stand till two strata are formed, —(*a*) an ethereal solution of pancreatized fat at the top, (*b*) a watery stratum at the bottom. Decant the ethereal stratum and filter, put it into a proper still, and recover the Ether by distillation. The result is Pancreatized Fat.

3. To make PURIFIED PANCREATIC EMULSION:—

Pancreatized Fat, 2; Rectified Spirit, 1; Distilled Water, 3; Oil of Cloves, a sufficiency: mix gradually in a marble mortar, adding the spirit and water little by little, and enough oil of Cloves to give a slight flavour.

*Tests.*—The "Pancreatized Fat," when made into Lead Plaster by Oxide of Lead, should yield glycerine.

The "Watery Stratum" left after decanting the ethereal stratum of pancreatized fat (No. 2) should yield no glycerine.

The "Purified Pancreatic Emulsion" should be permanent, and should have an acid reaction.

*Dose.*—From 1 to 4 drms. mixed in milk or water, from once to four times in twenty-four hours.

## PAPAVERIS CAPSULÆ.

### POPPY CAPSULES.

The nearly ripe capsules of the White Poppy, *Papaver somniferum*, dried; cultivated in Britain.

### *Medicinal Properties.*

Similar to Opium, but weaker and of uncertain strength.

(In all the Pharmacopœias; Fr. Pavot.)

## Preparations.

**DECOCTUM PAPAVERIS.**

Poppy Capsules, bruised, 1; Boiling Distilled Water, 15: boil ten minutes, and strain; product should be 10. =(1 in 10).

(Belg. 1 in 20; not in the others.)

An external soothing application, applied warm.

**EXTRACTUM PAPAVERIS.** Intense brown.

Poppy Capsules, dried and freed from seeds, coarsely powdered, 16; Rectified Spirit, 2; boiling Distilled Water, a sufficiency: mix the Poppy Capsules with 40 of the water, stirring them frequently during twenty-four hours, then pack in a percolator, and pass water slowly through them until about 160 have passed through. Evaporate the liquor by a water bath to 20; when cold, add the spirit. After twenty-four hours, filter the liquid and evaporate to a pilular consistence.

*Dose.*—2 to 5 grs.

**SYRUPUS PAPAVERIS.** Intense brown.

Poppy Capsules, dried, freed from seeds and coarsely powdered, 36; Rectified Spirit, 16; Refined Sugar, 64; boiling Distilled Water, a sufficiency: macerate the Poppy Capsules in 80 of the water. Infuse for twenty-four hours, then pack in a percolator, and adding more of the water, allow the liquor slowly to pass until 320 have been collected, or the Poppies are exhausted; evaporate the liquor by a water bath until it is reduced to 60; when quite cold, add the spirit, let the mixture stand for twelve hours, and filter. Distil off the spirit, evaporate the remaining liquor to 40, and then add the sugar; the product should weigh 104, and measure 78¾, and should have the sp. g. 1·320. =(1 in nearly 2½).

*Dose.*—1 drm.; 10 to 20 minims for children, increasing cautiously in consequence of their susceptibility to the influence of Opium.

In this process the spirit is added to the cooled decoction, and thus coagulates the gummy matters; the filtered liquor, now being made into a syrup with the sugar, will be preserved from fermentation even in hot weather.

But in the old formula the spirit was added to the finished syrup, and the syrup always fermented in warm weather.

(Austr. Syr. Diacodii, about 1 in 18; Belg. with alcoholic *extract* and simple syrup, 1 in 100; Dan. about 1 in 12; Fr. Sirop Diacode, 1 of extract of Opium in 2000; Ger. and Russ. about 1 in 14; not in others.)

### Not Official.

Extractum Liquidum.—The liquid obtained by the process for making the syrup (previous to adding the sugar), 3; Rectified Spirit, 1: mix.

*Dose.*—30 to 60 minims.

*Decoctum Concentratum* is the liquid extract without the spirit.

# PAREIRÆ RADIX.

## PAREIRA ROOT.

The dried root of *Cissampelos Pareira*, or, according to Hanbury, *Chondodendron Tomentosum*, from Brazil.

Several kinds have been imported; a good deal of the stem, which closely resembles the root, is also imported, and is said to be much less efficacious. The root itself has frequently filiform rootlets attached to it.

(U.S. Fr.; not in others.)

### *Medicinal Properties.*

Tonic, aperient, and diuretic. In calculous affections, chronic inflammation, and ulceration of the kidneys and bladder: strongly recommended by the late Sir B. Brodie for its action on the mucous membrane of the bladder.

*Dose.*—Of the powder, 30 to 60 grs.

Best prescribed with Opium.

### Preparations.

**DECOCTUM PAREIRÆ.**

Pareira Root, sliced, 1½; Distilled Water, 20: boil fifteen minutes, and strain; add water to measure 20. =(1 in 13⅓).

(Not in other Pharmacopœias; U.S. Infusum Pareiræ, 1 troy ounce, Boiling Water, 16 fl. ozs.)

*Dose.*—1 to 2 ozs. three or four times a day.

**EXTRACTUM PAREIRÆ.** Intense brown.

Pareira Root, in coarse powder, 1; boiling Distilled Water, 10, or a sufficiency: digest the Pareira with 1¼ of water for twenty-four hours, then pack in a percolator, and add water, till, by slow percolation, 10 has passed through, or the Pareira is exhausted. Evaporate by a water bath to a pilular consistence.

*Dose.*—10 to 20 grs.

The *solid* extract is sixteen times stronger than the liquid extract. It is prescribed with the decoction, to increase its power.

**EXTRACTUM PAREIRÆ LIQUIDUM.** Intense brown.

Pareira Root, in coarse powder, 16; boiling Distilled Water, 160, or a sufficiency; Rectified Spirit, 3: macerate in 20 of water for twenty-four hours, pack in a percolator, adding more of the water, allow the liquor slowly to pass, until 160 has been collected, or the Pareira is exhausted, evaporate to 13, and when cold add the spirit, filter, and make up to 16. =(1 in 1).

(U.S. 1 in 1 with glycerine.)

*Dose.*—½ to 2 drms.

INCOMPATIBLES.—The persalts of Iron, Salts of Lead, Tinct. of Iodine.

Not Official.

## PARIETARIA.

PELLITORY OF THE WALL.

**A tablespoonful of the preserved Juice, or 10 grs. of the Extract, three times a day; most efficacious in dropsy.**

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## PEPSINE.

PEPSINE.

A preparation of the mucous lining of a fresh and healthy stomach of the pig, sheep, or calf.

The stomach of one of these animals recently killed having been cut open and laid on a board with the inner surface upwards, any adhering portions of food, dirt, or other impurity, are to be removed, and the exposed surface slightly washed with cold water; the cleansed mucous membrane is then to be scraped with a blunt knife or other suitable instrument, and the viscid pulp thus obtained is to be immediately spread over the surface of glass or glazed earthenware, and quickly dried at a temperature not exceeding 100° F. The dried residue is to be reduced to powder and preserved in a stoppered bottle.

*Characters and Tests.*—A light yellowish-brown powder, having a faint but not disagreeable odour, and a slightly saline taste, without any indication of putrescence. Very little soluble in water or spirit. Two grains of it, with an ounce of distilled water, to which five minims of hydrochloric acid have been added, form a mixture in which 100 grains of hard-boiled white of egg, in thin shavings, will dissolve on their being digested together for about four hours at a temperature of 98° F.

*Dose.*—2 to 5 grains.

A few more minims of Hydrochloric Acid would not have been amiss, and ten degrees of temperature might have been added with advantage.—Ed.

The process is that called Beale's process, which has long been employed for making the Pepsine Porci; the great objection to it is, that the epithelium which is scraped off the stomach is dried with the Pepsine. This exposed to a damp atmosphere becomes putrid more or less, and acquires a most repulsive odour.

M. Hottot-Boudault has, however, discovered a means of getting rid of the epithelium, and has produced a Pepsine which contains neither starch nor sugar of milk, and which does not undergo decomposition. It is the strength ordered in the British Pharmacopœia. The author has undertaken the agency of this preparation, and for the sake of distinction, as well as a guarantee that this preparation should be always supplied when prescribed, it should be written *Pepsine Squire*. Dose, 2 to 5 grains in powder or in pill made with glycerine.

The importance of Pepsine in aiding digestion has been justly valued by the profession for a very long period; before the method of preserving it was discovered, the scrapings of calves' stomachs were employed when gastric juice was found to be deficient.

When Sir James Clark went to the French Exhibition in 1855 with her Majesty he brought some of the preparation of M. Boudault over with him, which enabled the medical men of this country to give it a trial; it has been therefore an established remedy for seven-and-twenty years.

It is very remarkable that when meat is macerated with water and Hydrochloric Acid, it becomes putrid in a very short time, but when sufficient Pepsine has been added to digest the meat, it remains perfectly sweet for a long time. May we not conclude from this, that properly digested food produces no inconvenience, whilst the undigested food decomposes in its passage, giving rise to noxious gases?

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# PHOSPHORUS.

P, eq. 31.

A NON-METALLIC ELEMENT OBTAINED FROM BONES.

A semi-transparent colourless wax-like solid, which emits white vapours when exposed to the air.

Sp. g. 1·770. Melts at 110° F., and ignites in the air.

Soluble in Ether, in Olive Oil, and in melted fats; sparingly in boiling Rectified Spirit; insoluble in water.

(Belg. Dan. Fr. Ger. Russ. and U.S.)

Used for making Acidum Phosphoricum Dilutum.

## *Medicinal Properties.*

Given to improve nerve tone, or to repair nerve tissue, it acts as a powerful general stimulant, principally on the kidneys and genital organs, exciting venereal appetite; it should be given with caution, as too free a use of it leads to a gradual decay of genital functions, and to general paralysis. The preparations are Oleum and Pilula Phosphori, and it has been combined with Cod-Liver Oil and other menstrua, but the pills in suet containing $\frac{1}{80}$th of a grain in each seem to be the most convenient form. The Hypophosphites of Soda and of Lime are other forms of giving loosely combined Phosphorus.

## Preparations.

**OLEUM PHOSPHORATUM.**

Phosphorus, 12 grs.; Almond Oil, previously heated to 300° F. for 15 minutes and allowed to cool, and filtered, 4 ozs.

Put them into a bottle capable of holding 4½ ozs., and heat them in a water bath to 180° F., removing the stopper two or three times to allow the escape of expanded air, then frequently shake until dissolved. =(1 in 160).

*Dose.*—5 to 10 mins.

(Belg. and Fr. 1 in 50: Ger. 1 in 80; Russ. 1 in 100.)

**PILULA PHOSPHORI.**

Phosphorus, 2 grs.; Balsam of Tolu, 120 grs.; Yellow Wax, 60 grs.

Put the Phosphorus and Balsam of Tolu into a Wedgewood mortar, previously half filled with hot water; when they are melted, rub together beneath the surface of the water until no particles of Phosphorus are visible, the temperature being maintained at or near 140° F. Add the Wax, and when it softens blend the whole thoroughly together. Should be kept immersed in water. =(1 in 90).

*Dose.*—3 to 6 grs. = $\frac{1}{30}$ to $\frac{1}{15}$ of a grain.

Patients complain of these pills passing through the bowels unchanged.

Not Official.

**Pilula Phosphori c. Sevo.**—Phosphorus, 10 grs.; Mutton Suet, 500 grs.; Powdered Liquorice, 290 grs.; Powdered Mastic, 100 grs. Melt the Suet, add the Phosphorus, digest with agitation over a water bath till dissolved, now pour the Solution on to the powder previously well mixed and thoroughly dried, and place in stoppered bottle, standing in very hot water, so that the melted suet is not chilled, but readily mixes by violent agitation with the powder. When divided into 3-grain pills, each pill contains $\frac{1}{30}$th of a grain of Phosphorus.

This formula is a good one.

Not Official.

## PHYSALIS ALKAKENGI.

WINTER CHERRY.

The Solanum Vesicarium of the old dispensatories.

The ripe berries are full of seeds, said to act on the liver; they yield half their weight in juice.

**Tinctura.**—Dried Berries, 2; Proof Spirit, 8: digest 7 days.

Diuretic, febrifuge. Dose of the tincture, 1 to 2 drs.

## PHYSOSTIGMATIS FABA.

CALABAR BEAN.

The seed of *Physostigma venenosum*, Western Africa, about twice the size of a horse-bean, with a very firm, hard, brittle, shining integument, of a brownish-red colour, irregularly kidney-shaped.

It yields its virtues to Alcohol, and imperfectly to water. Eserine is the active principle. It is a brown sticky extract, very deliquescent, and soon spoils. The Sulphate can only be obtained in brown scales, which are very deliquescent and difficult to preserve.

*Dose.*—In powder, 1 to 4 grs.

(Dan. Fr. Ger. Russ. and U.S.)

45 grs. yield 1 gr. of Extract.

*Stimulates the liver, but not powerfully unless given in large doses.—Dr. Rutherford.*

### *Medicinal Properties.*

An interesting account of *Traumatic Tetanus* being cured by Calabar Bean, $\frac{1}{8}$ gr. of the Extract given every hour, increasing the dose according to symptoms.—*Vide Lancet*, April 4th, 1868.

### Preparation.

**EXTRACTUM.** Deep brown.

Calabar Bean, in coarse powder, 1; Rectified Spirit, 5: macerate the bean for forty-eight hours in one-fourth of the spirit in a closed vessel, agitating occasionally, then transfer to a percolator, and when the fluid ceases to pass, add the remainder of the spirit, so that it may slowly percolate through the powder; subject the residue of the bean to pressure, adding the pressed liquid to the product of the percolation, distil off most of the spirit, and evaporate what is left in the retort by a water bath to the consistence of a soft extract.

*Dose.*—1/16 to ¼ gr. three times daily.

Subcutaneous injection. ⅓ gr. in 10 mins. of water for tetanus.

(Same as Dan. Fr. and U.S.; Ger. with Proof Spirit, Ext. Fabæ Calabaricæ; Russ. with Spirit, Water, and Acetic Acid.)

### Not Official.

TINCTURA.—Bean, in coarse powder, 1; Rectified Spirit, 5: digest fourteen days.

*Dose.*—10 minims, gradually increasing.

(Dan. 1 and 10; not in the others.)

Books of Calabar paper and of gelatine, with divided squares, are used by oculists to contract the pupil of the eye (after the use of Belladonna), in order to bring back the vision to the normal state.

GUTTÆ ESERINÆ.—Sulphate of Eserine, 2 grs.; Water, 1 oz.—*London Ophthalmic.*

## PILULÆ.

### PILLS.

This class of medicine, so convenient and portable, was introduced in the earliest Pharmacopœias, and some of them remain unchanged to the present day. We may mention the Pilula Rufi, which has for at least two hundred years maintained the same proportions, and is now called Pil. Aloes et Myrrhæ. Pills have been rolled in flour, starch, magnesia, liquorice powder, and on the Continent in lycopodium; also, enveloped in silver leaf, and more recently coated with egg-albumen and with Ethereal Solution of Tolu for the purpose of preventing them from becoming dry and hard, as well as to shield them from the palate, and so prevent their being tasted. When pills are intended to pass through the stomach, as in the case of Aloes, so as to act entirely on the lower bowels, they are made up with Alcohol, and varnished with an ethereal solution of Tolu.

The following are contained in the British Pharmacopœia, the formulas for which will be found under the names of the substances from which they are prepared:—

| | Proportions of active ingredient in the mass. |
|---|---|
| PILULA ALOES BARBADENSIS | 1 in 2. |
| PILULA ALOES ET ASSAFŒTIDÆ | Aloes 1, Ass. 1 in 4. |
| PILULA ALOES ET FERRI | Aloes 1, Iron ¾ in 5¼. |
| PILULA ALOES ET MYRRHÆ | Aloes 1, Myrrh ½ in 3. |
| PILULA ALOES SOCOTRINÆ | 1 in 2. |
| PILULA ASSAFŒTIDÆ COMPOSITA | Ass. 1, Galb. 1 in 3½. |
| PILULA CAMBOGIÆ COMPOSITA | about 1 in 6. |
| PILULA COLOCYNTHIDIS COMPOSITA | Col. 1, Aloes 2, Scam. 2 in 6. |
| PILULA COLOCYNTHIDIS ET HYOSCYAMI | Pil. Col. Co. 2<br>Ext. Hyos. 1. in 3. |
| PILULA CONII COMPOSITA | Ext. 2½, Ipec. ½ in 3. |

| | Proportions of active ingredient in the mass. |
|---|---|
| PILULA FERRI CARBONATIS . . . . . | Saccharo-Carbonate 1 in 1¼. |
| PILULA FERRI IODIDI . . . . . . . . . . | Iodide of Iron 1 in 3½. |
| PILULA HYDRARGYRI . . . . . . . . . . . . . | Mercury 1 in 3. |
| PILULA HYDRARG. SUBCHLORIDI COMPOSITA . . | 1 Calomel in 5. |
| PILULA IPECACUANHÆ CUM SCILLA . . . . | 3 Dover's Powder in 7. |
| PILULA PHOSPHORI . . . . | In 3-gr. Pills, each Pill containing $\frac{1}{30}$ gr. of Phosphorus. |
| PILULA PLUMBI CUM OPIO . . . . . . | Acet. Lead 6, Opium 1 in 8. |
| PILULA QUINLÆ . . . . . . . . . . . . . . . | 3 Quinine in 4. |
| PILULA RHEI COMPOSITA . . . . . . . | Rhubarb 1, Aloes ¾ in 4½. |
| PILULA SAPONIS COMPOSITA . . . . . . . | 1 Opium in 6 nearly. |
| PILULA SCAMMONII COMPOSITA . | Resin Scam. 1, Resin Jalap 1 in 3¼. |
| PILULA SCILLÆ COMPOSITA . . . . . . . . . . | Squill 1 in 5. |

N.B.—The usual dose of all pills is from 5 to 10 grains, unless otherwise directed.

When the penny-post commenced, pills were sent in flat wooden boxes, but were very frequently smashed by the obliterating stamps; the Author therefore had a pillar left in the centre, to act as a bridge, and support the lid from side to centre; this answered perfectly, and pills have thus been sent per post safely up to the present time.

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## PIMENTA.

### PIMENTO.

The dried unripe berries of the Allspice-tree, *Eugenia Pimenta*, from the West Indies.

*Medicinal Properties.*

A warm aromatic stimulant, like Cloves; used as an adjuvant to tonics and purgatives.

*Dose.*—10 to 30 grs. in powder.

(U.S. Belg. Fr. Piment de la Jamaïque; not in others.)

Contained in Syrupus Rhamni.

### Preparations.

**AQUA PIMENTÆ.**

Pimento, bruised, 7; Water, 160 nearly: distil one-half.
=(1 in 11½).

*Dose.*—1 to 2 oz.

(Belg. made with essence; not in others.)

**OLEUM PIMENTÆ.** Colourless at first. Becomes more or less brownish-red by keeping.

The Oil distilled in Britain from Pimento. Sp. g. 1·02.

*Dose.*—1 to 3 minims, on sugar, in pill, or emulsion.

(Belg. U.S.; not in others.)

Not Official.

## PINI SYLVESTRIS OLEUM.

OIL OF SCOTCH PINE LEAF.

It is prepared from the leaves of *Pinus Sylvestris* and is well known in Germany, whence it is imported as Fir Wool Oil. It is perfectly colourless and transparent, and has an agreeable odour of the fresh pine. It has a specific gravity ·868 at 60° F., and is sold in this country and on the continent for external use in rheumatism.

Vapor Pini Sylvestris.—Oil of Scotch Pine (Fir wool oil) 40 minims; Light Carbonate of Magnesia, 20 grains; Water to 1 ounce: mix.

A teaspoonful in a pint of water at 140° F. for each inhalation.

*Use.*—A mild but useful stimulant in chronic laryngitis.—*Throat Hospital Pharmacopœia.*

## PIPER NIGRUM.

BLACK PEPPER.

The dried unripe berries of *Piper nigrum*, chiefly from the East Indies.

### *Medicinal Properties.*

A warm carminative stimulant, producing general arterial excitement. Chiefly used to excite the languid stomach and correct flatulence. Acts on the mucous membrane of the rectum, whence it is useful in hemorrhoids; also on the membrane of the urethra, similarly to Cubebs. In intermittents it may be used as an adjuvant to more powerful febrifuges, when the stomach is not acted upon by Quinia, as with drunkards.

*Dose.*—5 to 20 grs. in powder.

(Belg.; Fr. Poivre Noir; U.S.; not in others.)

Contained in Confectio Opii and Pulvis Opii Compositus.

### Preparation.

**CONFECTIO PIPERIS.** Very dark olive-brown.

Black Pepper, in fine powder, 2; Caraway fruit, in fine powder, 3; Clarified Honey, 15: triturate. =(1 in 10).

*Dose.*—60 to 120 grs.

(Not in other Pharmacopœias.)

## PIX BURGUNDICA.

BURGUNDY PITCH.

A resinous exudation from the stem of the Spruce Fir, *Abies excelsa*, melted and strained; imported from Germany.

Solubility: dissolves in twice its weight of Glacial Acetic Acid.

(U.S.; Belg. Pix Alba; Fr. Poix de Bourgogne; Ger. and Russ. Resina Pini.)

It is the Thus or Frankincense of Lond. and Dub. Pharmacopœias, which exudes from the spruce fir, and when melted and strained is called Burgundy Pitch.

### Preparation.

**EMPLASTRUM PICIS.** Yellow.

Burgundy Pitch, 26; Common Frankincense (Thus Americanum*), 13; Resin, 4½; Yellow Wax, 4½; Expressed Oil of Nutmeg, 1; Olive Oil, 2; Water, 2: add the Oil and the Water to the other ingredients, previously melted together; stir, and evaporate to a proper consistence.

Applied to the chest in chronic pulmonary complaints, to the loins in lumbago, to the joints in chronic articular affections, and to other parts to relieve local pains of a rheumatic character. It acts as a counter-irritant.

(U.S. Yellow Wax 1, Burgundy Pitch 12; Belg. Olive Oil 1, Yellow Wax 3, Burgundy Pitch 16; Fr. Yellow Wax 1, Burgundy Pitch 3; Ger. Emp. Picis Irritans, Pine Resin 32, Yellow Wax 12, Turpentine 12, Euphorbium 3.)

## PIX LIQUIDA.

### TAR.

A bituminous liquid obtained from the wood of *Pinus sylvestris* (known in this country as the Scotch Pine), and other Pines by destructive distillation.

Thick, viscid, and brownish black, with a peculiar odour. Water agitated with it acquires a yellowish tint and an acid reaction.

Soluble in its own bulk of Rectified Spirit, and separates on the addition of water.

*Medicinal Properties.*

Similar to Turpentine. May be used internally in chronic catarrhal affections, and complaints of the urinary passages; also for some chronic skin diseases. Inhaled, the vapour is useful in chronic bronchitis. Also as an external application in cases of lepra, &c.

*Dose.*—20 to 60 minims, in pills with flour.

(In all the Pharmacopœias; Dan. Pyroleum Pini; Fr. Goudron Végétal, obtained from *Pinus maritima.*)

### Preparation.

**UNGUENTUM PICIS LIQUIDÆ.** Black.

Tar, 5; Yellow Wax, 2: melt together and stir till cold. Applied in cases of psoriasis, lepra, and scald-head.

(Belg. Tar 1, Lard 4; Dan. Pitch 11, Lard 6, Carbonate of Potash 3; Fr. Pommade de Goudron, Tar 1, Lard 3; U.S. Tar 1, Suet 1.)

Used to remove tetter and in tinea capitis.

### Not Official.

AQUA (TAR WATER).—Stir a pint of Tar with half a gallon of Water for fifteen minutes, and decant.

*Dose.*—From 1 to 2 pints daily, or may be used as a wash.

(Belg. Tar 1, Water 20; Fr. Eau de Goudron, Tar 1, Water 30; Ger. Tar 1, Water 10; Russ. Birch Tar 1, Water 30; U.S. Tar 1, Water 4.)

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* From the *Pinus palustris*, Lambert; *Pinus Tæda*, Lindley.

PILULÆ PICIS.—Tar and Liquorice Powder, equal weights mixed, and made into five-grain pills.

*Dose.*—2 or 3 pills thrice daily (Dr. Seymour).

They are sometimes made of Black Pitch, and taken to relieve hemorrhoids.

TAR CAPSULES.

*Dose.*—2 capsules, three or four times a day, as a stimulant and diuretic.

LAIRITZ'S FIR WOOL OIL.—Oleum Pini Sylvestris; colourless. Sold in bottles with the fir wool for rheumatism.

BLACK PITCH.—There are three kinds, Archangel, Swedish, and that obtained from Gas Tar; the latter is without odour. Pitch pills are taken to increase the size and weight of the body.

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Not Official.

## PLUMBUM.

### LEAD.

**Pb**, eq. 207.

Sp. g. 11·3; fuses at 617° F. Lead occurs in nature as an oxide, and as a sulphide called *galena;* also in saline combination, forming the native sulphate, phosphate, carbonate, chromate, molybdate, tungstate, and arseniate of lead. The native oxide is rare, but galena, the ore from which nearly all the lead of commerce is extracted, is exceedingly abundant.

INCOMPATIBLES. } Are given after Plumbi Subacetatis Liquor.
ANTIDOTES. }

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## PLUMBI ACETAS.

### ACETATE OF LEAD.

*Syn.* SUGAR OF LEAD.

$Pb\ (C_2H_3O_2)_2.\ 3H_2O$, eq. 379.

In white masses of interlaced acicular crystals, slightly efflorescent, having an acetous odour, and a sweet astringent taste.

Solubility: 10 in 25 of Water.

*Test.*—Its solution in Distilled Water is clear, or is only slightly turbid, and becomes clear on the addition of Acetic Acid. 38 grains dissolved in water require for complete precipitation 200 grain-measures of the volumetric solution of Oxalic Acid.

*Medicinal Properties.*

In small doses it is sedative and astringent, lessening morbid mucous discharges and hemorrhages, and even diminishing natural secretions; whence it is useful in chronic diarrhœa and dysentery. Used in phthisis to check expectoration; in bronchitis to abate profuse secretion. Its use requires caution. It is often followed by a small dose of Acetic Acid, because excess of Acid makes it less injurious to the system. Externally, it is sedative, desiccant, and astringent, diminishing profuse discharges of ulcers; also for injection in gonorrhœa.

*In large doses somewhat lessens the secretion of bile, probably by direct action on the liver.—Dr. Rutherford.*

*Dose.*—1 or 2 to 4 grs. in pill; also in solution, with excess of Acetic Acid.

(In all the Pharmacopœias; U.S.; Austr. Ger. and Russ. Plumbum Aceticum; Belg. Acetas Plumbi Depuratus; Fr. Acétate de Plomb.)

Incompatibles.—Sulphuric and Tannic Acids, and their salts.

Antidotes.—Same as under Liq. Plumbi Subacetatis.

## Preparations.

**PILULA PLUMBI CUM OPIO.** Intense brown.

Acetate of Lead, in fine powder, 6; Opium, in fine powder, 1; Confection of Roses, 1: mix.

A four-grain pill contains 3 grs. of Plumbi Acetas. and ½ gr. Pulvis Opii.

*Dose.*—A four-grain pill every three or four hours for hemorrhage.

(Fr. gives Brit. formula; not in others.)

**SUPPOSITORIA PLUMBI COMPOSITA.**

Powder of Acetate of Lead, 36; Opium in Powder, 12; Benzoated Lard, 42; White Wax, 10; Oil of Theobroma, 80: melt the Wax and Oil of Theobroma with a gentle heat, then add the other ingredients previously rubbed together in a mortar, and having mixed them thoroughly, pour the mixture while it is fluid into suitable moulds of the capacity of 15 grains.

The above makes 12 suppositories.

Each suppository contains 3 grs. of Acetate of Lead and 1 gr. of Opium.

**UNGUENTUM PLUMBI ACETATIS.** White; sweet at first; becomes rancid by keeping.

Acetate of Lead, in fine powder, 12 grs.; Benzoated Lard, 1 oz.: mix. =(1 in 37½).

(Austr. Acetate of Lead 3, Lard 150, White Wax 50, Water 10; Dan. Acetate of Lead 5, Olive Oil 36, White Wax 9; Russ. Ceratum, Yellow Wax 12, Olive Oil 12, Acetate of Lead, levigated, 1.)

### Not Official.

Lotio Plumbi Acetatis.—Acetate of Lead, 2 grs.; Diluted Acetic Acid, 2 mins.; Water to 1 oz.—*London Ophthalmic Hospital.*

Pessaries.—Acetate of Lead, 7½; Oil of Theobroma sufficient for one pessary.

Acetate of Lead, 5 grs.; Opium, in powder, 2 grs.; Oil of Theobroma or Stearine sufficient for one pessary.

U.S. Suppositoria Plumbi.—Acetate of Lead 3 grs. with Oil of Theobroma.

U.S. Suppositoria Plumbi et Opii.—Acetate of Lead 3 grs.; Ext. of Opium ½ gr. with Oil of Theobroma.

## PLUMBI CARBONAS.

### CARBONATE OF LEAD.

A soft, heavy, white powder.

Solubility: insoluble in water; soluble, with effervescence, in diluted Nitric Acid, and Acetic Acid.

*Test.*—Dissolves in Acetic Acid without leaving any residue, and the solution, when treated with excess of Sulphuretted Hydrogen, boiled, and filtered (all the Sulphide of Lead separated), gives no precipitate with Oxalate of Ammonia—indicating absence of Lime.

### *Medicinal Properties.*

Employed externally as an astringent and sedative, or as an ointment for ulcers and inflamed and excoriated surfaces.

(Same as U.S.; Austr. and Russ. Plumbum Carbonicum; Belg. Carbonas Plumbi Venalis; Fr. Carbonate de Plomb; Ger. Cerussa.)

### Preparation.

**UNGUENTUM PLUMBI CARBONATIS.** Cream colour and inodorous.

Carbonate of Lead, in fine powder, 62 grs.; Simple Ointment, 1 oz.: mix thoroughly. =(1 in 8).

(Belg. 1 in 6½; Austr. Dan. Ger. and Russ. 1 in 3; U.S. 1 in 8; Fr. Pommade de Carbonate de Plomb, 1 and 5.)

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## PLUMBI IODIDUM.

### IODIDE OF LEAD.

$PbI_2$, eq. 461·0.

Nitrate of Lead, 4; Iodide of Potassium, 4; Distilled Water, a sufficiency: dissolve, with heat, the Nitrate of Lead in 30 of water, and the Iodide of Potassium in 10 of water; mix the solutions, collect the precipitate on a filter, wash it with Distilled Water, and dry it with a gentle heat.

(U.S.; Belg. Ioduretum Plumbi; Fr. Iodure de Plomb; Ger. and Russ. Plumbum Iodatum; not in Austr. and Dan.)

### *Medicinal Properties.*

Used externally as an alterative and discutient.

### Preparations.

**EMPLASTRUM PLUMBI IODIDI.** Pale orange.

Iodide of Lead, 1; Soap Plaster, 4; Resin Plaster, 4: add the Iodide of Lead in fine powder to the plasters previously melted, and mix them intimately.

**UNGUENTUM PLUMBI IODIDI.** Bright orange.

Iodide of Lead, in fine powder, 62 grs.; Simple Ointment, 1 oz.: mix thoroughly. =(1 in 8).

Not Official.

**Pessary.**—Iodide of Lead, 5 grs.; Oil of Theobroma sufficient for one pessary.

## PLUMBI NITRAS.

### NITRATE OF LEAD.

$Pb(NO_3)_2$, eq. 331.

Used to produce Plumbi Iodidum.

(U.S. and Russ.; not in the others.)

## PLUMBI OXIDUM.

*Syn.* Lithargyrum. 1864.

PbO, eq. 223.

In heavy scales of a pale brick-red colour.

Soluble in diluted Nitric Acid and in Acetic Acid without effervescence. Its solution in diluted Nitric Acid, when supersaturated with Ammonia and cleared by filtration, does not exhibit a blue colour—indicating absence of Copper.

Absence of Iron is also important; it sometimes contains Iron, and will not then make a white plaster.

### *Medicinal Properties.*

For external application only, to abate inflammation.

(In all the Pharmacopœias.)

### Preparation.

**EMPLASTRUM PLUMBI.** Pale yellow.

Oxide of Lead, in very fine powder, 1; Olive Oil, 2½; Water, 1: boil all the ingredients together gently by the heat of a steam-bath, and keep them simmering for 4 or 5 hours, stirring constantly until the product acquires the proper consistence for plaster, adding more water during the process if necessary.

Contained in Emp. Ferri, Emp. Galbani, Emp. Hydrarg., Emp. Resinæ, Emp. Saponis.

This plaster of former Pharmacopœias wanted adhesiveness. The British Pharmacopœia directs long boiling, which secures sufficient tenacity, and it now resembles the famous strapping-plaster of Dr. Scott, of Bromley. Care, however, must be taken to use Italian Oil; Gallipoli and Spanish oils will not make an adhesive plaster.

(Same as Austr. Empl. Diachylon Simplex, Litharge 1, Lard 2; Belg. Litharge 2, Olive Oil 4, Water 1; Dan. Litharge 5, Olive Oil 9, Water 1; Fr. Litharge 1, Lard 1, Olive Oil 1, Water 4; Ger. and Russ. Litharge 1, Lard 1, Olive Oil 1, Water *q.s.*; U.S. Empl. Plumbi, Litharge 15, Oil 28, Water *q.s.*)

Equal weight of Lead Plaster and Soap Plaster melted together is an excellent plaster for corns.

Not Official.

UNG. DIACHYLON. HEBRÆ,* Ger.—Simple Lead Plaster 1, Linseed Oil 1 (by weight): melt with heat.

DR. PEARSON'S CERATE.—Lead Plaster 4, Yellow Wax 1, Oil of Almonds 3: mix.

## PLUMBI SUBACETATIS LIQUOR.

### SOLUTION OF SUBACETATE OF LEAD.

*Syn.* LIQUOR PLUMBI DIACETATIS.

Subacetate of Lead, $Pb_2C_4H_6O_5$, eq. 548;
dissolved in water.

A dense, clear, colourless liquid, with alkaline reaction and sweet astringent taste.

Acetate of Lead, 5; Oxide of Lead, in powder, 3½; Distilled Water, 20: boil half an hour, constantly stirring; filter, and make up 20.

*Test.*—Sp. g. 1·260. 6 fluid drachms (413·3 grains by weight) require for perfect precipitation 810 grain-measures of the volumetric solution of Oxalic Acid.

### *Medicinal Properties.*

When largely diluted, it is used externally as an astringent and sedative for inflammation arising from sprains, bruises, &c.; applied by means of cloths kept wet. As an astringent gargle (½ drm. to 6 ozs. Rose Water).

(In all the Pharmacopœias; U.S. sp. g. 1·267; Austr. Plumbum Acetum Solutum, sp. g. 1·230—1·240; Belg. Subacetas Plumbi Liquidus, sp. g. 1·240; Dan. Solutio Subacetatis Plumbici, sp. g. 1·170—1·175; Fr. Sous-Acétate de Plomb Liquide, sp. g. 1·320; Ger. Liquor Plumbi Subacetici, sp. g. 1·235—1·240; Russ. Plumbum Aceticum Basicum Solutum, sp. g. 1·236—1·240.)

INCOMPATIBLES.—Hard Water, Mineral Acids, and Salts, Vegetable Acids, Alkalies, Lime Water, Iodide of Potassium, all astringents, preparations of Opium, Albuminous Liquids.

ANTIDOTES.—In case of poisoning with Acetate of Lead, the antidotes are—Sulphate of Soda, Epsom Salts, succeeded by emetics, and afterwards by Opium and liberal libations of Milk, or white of Egg mixed with water.

A course of Iodide of Potassium is useful in eliminating Lead from the system.

It is said that men who work in the lead mines, living chiefly on milk, are not subject to lead poisoning.

*Lancet*, Oct. 29, 1881, p. 779, gives an unusual source of Lead poisoning, from shot found in a bottle full of Port wine; an appreciable quantity of Lead was found in solution.

### Preparations.

**LIQUOR PLUMBI SUBACETATIS DILUTUS.** Slightly opaque, with a deposit.

Solution of Subacetate of Lead, 1; Rectified Spirit, 1; Distilled Water, 78: mix and filter. =(1 in 80).

(U.S. 1 and 40; Austr. 1 and 50; Belg. 3 in 100; Dan. Fr. (Lotion avec l'Acétate de Plomb); Ger. and Russ. (Aq. Plumbi), 1 in 50.

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* This has lately been modified by Hebra's son-in-law, Professor Kaposi, thus Simple Lead Plaster, 1; Vaseline, 1: melt with heat.

**UNGUENTUM PLUMBI SUBACETATIS COMPOSITUM.** Sweet at first; becomes rancid if exposed to the air.

Solution of Subacetate of Lead, 6 ozs.; Camphor, 60 grs.; White Wax, 8 ozs.; Almond Oil, 20 ozs.: melt the wax with 16 ozs. of the oil on a water bath; remove the vessel, and, as soon as the mixture begins to thicken, gradually add the solution of subacetate of lead, and stir the mixture constantly until it cools; then add the camphor, dissolved in the rest of the oil, and mix thoroughly. =(1 in 5¾).

(Belg. Unguent. Subacetatis Plumbi, 1 in 3; Fr. Cérat Saturné, 1 in 10; Ger. Unguentum Plumbi, 3 in 40; Russ. 1 in 12; U.S. 1 in 5; not in Austr. and Dan.)

This Ointment soon becomes rancid; when, however, Vaseline is employed in the place of Wax and Oil it keeps free from rancidity for several months.

### Not Official.

**Cremor Lithargyri** (Dr. Kirkland).—Solution of Diacetate of Lead, 1; Cream, 8: mix.

**Gargarisma Plumbi.**—Solution of Diacetate of Lead, 1; Barley Water, 30: mix.

**Lotio Plumbi Diacetatis.**—From 3 minims to 7 minims to an ounce of water.

**Glycerinum Plumbi Subacetatis.**—Substitute Glycerine in the place of water, in the formula for Liquor Plumbi Subacetatis, using an oil-bath at temperature of boiling Glycerine.

There are no preparations of Lead of the British Pharmacopœia suitable for skin diseases; the Liquor is too thin, the ointment soon becomes rancid, even if Benzoated Lard be used. Balmanno Squire employed the Glycerinum.

**Vaselinum.**—Liquor Plumbi Subacetatis, ½ an ounce; White Vaseline, 3 ozs.: mix. This is an excellent application for Eczema, and keeps without becoming rancid.

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# PODOPHYLLI RADIX.

## PODOPHYLLUM ROOT.

The dried rhizome of *Podophyllum peltatum;* imported from North America.

### *Medicinal Properties.*

An active cathartic. Applicable to cases where brisk purging is required; combined generally with Henbane. Used in the place of Calomel as a cholagogue and purgative.

*Dose.*—10 to 20 grs. in powder, but rarely used in England, the resin being generally prescribed.

### Preparation.

**RESINA PODOPHYLLI.** A greenish-yellow powder.

Podophyllum Root, in coarse powder, 1; Rectified Spirit, 3¾, or a sufficiency; Distilled Water and Hydrochloric Acid, of each a sufficiency: exhaust the podophyllum by percolation with the spirit; distil over the spirit; slowly pour the liquid remaining after the distillation of the tincture into three times its volume of water acidulated with one-twenty-fourth part of its weight of hydrochloric acid, constantly stirring; let it stand twenty-four hours; collect the resin which falls, wash on a filter with distilled water, and dry in a stove.

Solubility: totally in Rectified Spirit and Ammonia, and almost entirely in pure Ether.

Given in pills with Soap and Hyoscyamus, Rhubarb or Aloes.

*A very powerful stimulant of the liver, and also of the intestine.—Dr. Rutherford.*

*Dose.*—⅛ to ½ or even 2 grs. have been given in obstinate cases, but it is best to begin with ⅛, and may be prescribed with Aloes and Soap.

(Russ. and U.S.; not in other Pharmacopœias.)

**Not Official.**

Suppositorium.—Resin of Podophyllum, 1 gr.; Oil of Theobroma or Stearine sufficient to make one suppository.

Tinctura.—Resin of Podophyllum, 1; Rectified Spirit, 60.

*Dose.*—15 to 20 minims.

Said to be more manageable than the powder, and less violent.

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**Not Official.**

## POTASSIUM.

### POTASSIUM.

K, eq. 39.

Potassium was discovered by Sir Humphrey Davy in 1807. It is a soft metal (sp. g. 0·865), cutting like wax, of a silver-white colour, but tarnishes the instant it is cut, and assumes a leaden colour. It has so great an affinity for Oxygen, that when thrown on water it combines with it, evolving heat enough to set the Hydrogen on fire, and a Solution of Potash is the result.

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## POTASSII BROMIDUM.

### BROMIDE OF POTASSIUM.

Kbr, eq. 119.

In white cubical crystals, odourless, of a pungent saline taste.

Solubility, 1 in 2 of Water; 1 in 90 of Rectified Spirit.

*Test.*—10 grains require for complete decomposition 840 grain-measures of the volumetric solution of Nitrate of Silver. A solution of this salt, mixed with mucilage of Starch, and *a drop* of aqueous solution of Bromine or Chlorine, does not exhibit any blue colour—indicating absence of Iodide.

When its solution in water is mixed with a little Chlorine, Chloroform agitated with it, on falling to the bottom, exhibits a red colour.

*Medicinal Properties.*

Introduced for chronic enlargements of the liver. It is employed in enlargement of the spleen, and in bronchocele and scrofula. It exerts a powerful influence on the generative organs, lowering their functions in a marked degree. Useful in mania and nymphomania. All writers on epilepsy agree that the bromides are most valuable in that malady; their efficacy is, therefore, well attested. Relieves spasmodic asthma, both in children and adults. Useful in headache and overworked brain; also in low state of typhus, in combination with ⅛ gr. Sulphate of Morphia every three hours. This salt, as well as the Bromide of Ammonium, is used to produce anæsthesia of the larynx.

No permanent ill-effects have resulted from its continuous use.

*Dose.*—20 to 60 grains in the twenty-four hours.

(U.S.; Austr. Ger. and Russ. Kalium Bromatum; Dan. Brometum Kalicum; Fr. Bromure de Potassium; not in Belg.)

After long experience of its use, there remains no doubt that its efficacy in keeping off attacks of epilepsy for years is beyond dispute.

Hydrate of Chloral combined with 10 grs. of Bromide of Potassium. Good in mental affections.

Simple syrup covers the taste; Bromide of Sodium is, however, by far the most agreeable to the palate.

INCOMPATIBLES.—Acids, Acidulous Salts, Metallic Salts.

Not Official.

PESSARY.—Bromide of Potassium 10 grs.; Oil of Theobroma sufficient to make one pessary.

Not Official.

## POTASSII CYANIDUM PURUM.

Occasionally employed to produce Hydrocyanic Acid.

Dissolve 20 grains of the Cyanide in 6 drachms of Distilled Water. Dissolve 50 grains Crystallized Tartaric Acid in 3 drachms of Rectified Spirit: mix the solutions.

Bitartrate of Potash is precipitated, and the solution contains 1 grain of Hydrocyanic Acid in every fluid drachm.

It is useful to remove black stains on the skin by Nitrate of Silver.

Entomologists use it with gypsum to make poison bottles for killing insects without injuring the plumage or delicate structure; for this purpose 1 of the Cyanide, 2 of Plaster of Paris, and 1½ of Water, stirred together and poured whilst liquid into a wide-mouthed bottle, forms a hard floor, which is constantly giving off vapour.

Not Official.

## POTASSII FERROCYANIDUM.

*Dose.*—2 grains three times a day.

Useful in nervous and atonic digestion, sick headache, irregular bowels, and want of firmness of flesh.

# POTASSII IODIDUM.

## IODIDE OF POTASSIUM.

## KI, eq. 166.

In colourless, generally opaque, cubical crystals.

Solubility, 4 in 3 of Water; 1 in 16 of Rectified Spirit.

*Tests.*—The addition of Tartaric Acid and Mucilage of Starch to its watery solution does not develop a blue colour—indicating absence of Iodate. Solution of Nitrate of Silver added in excess forms a yellow-white precipitate (Iodide of Silver), which, when agitated with Ammonia, yields by subsidence a clear liquid, in which excess of Nitric Acid causes no turbidity—indicating absence of Chlorine. Its aqueous solution is only faintly precipitated by the addition of Lime—indicating absence of Carbonates.

### *Medicinal Properties.*

It is useful in cases where Iodine is indicated, and being less irritating is much preferred for internal administration. May be given with Quinine dissolved by Sulphuric Acid or Phosphoric Acid, but not with Nitro-hydrochloric; the eliminated Chlorine decomposes it, and makes an unsightly mixture. Useful in internal metritus and leucorrhœa. For secondary symptoms 60 grains in solution may be given in the twenty-four hours. Combined with Nux Vomica the system bears it better. It is useful in the elimination of Lead from the system in cases of Lead poisoning.

*Has no notable effect on biliary secretion.—Dr. Rutherford.*

*Does.*—2 to 10 grs., increasing the dose. 20 grs. have been given three times a day.

(Austr. Belg. Dan. Ger. and Russ. Kalium Iodatum; Fr. Iodure de Potassium; U.S.)

INCOMPATIBLES.—Sweet Spirit of Nitre, Subnitrate of Bismuth, Decoction of Liquorice, any vegetable preparation containing Starch; any acid preparations.

It is sometimes prescribed with Tincture of Bark, an ounce of which dissolves half a drachm.

Contained in Linimentum Iodi, Liquor Iodi, Tinctura Iodi, Unguentum Iodi.

### Preparations.

**LINIMENTUM POTASSII IODIDI CUM SAPONE.** Should be freshly prepared.

Hard Soap,* cut small, 1½; Iodide of Potassium, 1½; Glycerine, 1; Oil of Lemon, ⅛; Water, 10: dissolve the Soap in 7 of the water by heat of a water bath; dissolve the Iodide of Potassium and Glycerine in the remainder of the water, and mix the two solutions together; when the mixture is cold add the Oil of Lemon, and mix the whole thoroughly.

"Put the Glycerine, Iodide, and 3 ozs. Water into a clean 20-oz. wide-mouth bottle; then dissolve the soap (finely shaved) in the 7 ozs. of Water in a jar by the heat of a water bath; strain the solution whilst hot through muslin into the bottle containing the Iodide, etc.; allow to stand for two or three minutes, until the bottom of the soap solution is a little opaque, then mix by agitation; lastly add the Ess. Limonis, shaking briskly, and, after agitating at intervals for two hours or more, a liniment in the form of a soft white jelly will result, and remain so; if it should not, a small addition of water (½ oz.) will generally perfect it."

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* The Castile Soaps branded "Fabricius Paranque" and "Honore Arvanon" are those which answer the purpose best.

The advantages of this liniment are that it does not stain, nor does it irritate when rubbed on the skin; it is employed in enlargement of the joints, indurated glands, especially the cervical glands.

The addition to the Brit. Pharm. states that this Liniment may with advantage (?) be made with curd soap.—It makes a much stiffer liniment, and looks very opaque; patients will hardly believe it is the same liniment.

**UNGUENTUM POTASSII IODIDI.** White.

Iodide of Potassium, 64 grs.; Carbonate of Potash, 4 grs.; Distilled Water, 1 drm.; Prepared Lard, 1 oz.: dissolve the Carbonate and the Iodide in the Water, and mix thoroughly with the Lard.

=(1 in 8¾).

(About the same as U.S.; Belg. 1 in 10; Fr. about 1 in 9; Ger. and Russ. 1 in 10 with Hyposulphite of Soda; Dan. with Glycerinum Amyli, 1 in 10.)

*Note.*—The Carbonate is introduced in order to prevent the ointment turning yellow.

Not Official.

PESSARY.—Iodide of Potassium, 10 grs.; Oil of Theobroma sufficient to make one pessary.

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## POTASSA CAUSTICA.

### CAUSTIC POTASH.

Hydrate of Potash, **KHO**, eq. 56.

In hard white pencils, very deliquescent, powerfully alkaline and corrosive.

Solubility, 2 in 1 of Water.

*Test.*—56 grains dissolved in Water leave only a trace of sediment, and require for neutralization at least 900 grain-measures of the volumetric solution of Oxalic Acid.

### *Medicinal Properties.*

A powerful escharotic. Chiefly employed for making caustic issues. Has been much used for the destruction of tumours and the surface of malignant ulcers.

(In all the Pharmacopœias; Ger. and Russ. Kalium Causticum Fusum.)

### Preparation.

**LIQUOR POTASSÆ.** SOLUTION OF POTASH. Colourless.

Carbonate of Potash, 2; Slaked Lime, 1½; Distilled Water, 20: dissolve the carbonate of potash in the water, and having heated the solution to the boiling-point in a clean iron vessel, gradually mix with the slaked lime, and continue the ebullition for ten minutes with constant stirring; allow the insoluble matter to subside, decant the clear liquid, and add distilled water if necessary to make it correspond with the tests of sp. gr. and neutralizing power.

Sp. g. 1·058, containing 5·84 per cent. of Hydrate of Potash.

(U.S. sp. g. 1·065; Belg. Ger. and Russ. Liquor Kali Caustici, sp. g. 1·330—1·334, containing 33 per cent. of Potash; Dan. Solut. Hydrat. Kalici, sp. g. 1·194—1·198 (20 per cent.); not in Austr. and Fr.)

*Tests.*—1 fluid ounce (462·9 grains by weight) requires for neutralization 482 grain-measures of the volumetric solution of Oxalic Acid. It does not effervesce when added to an excess of diluted Hydrochloric Acid, nor give a precipitate with solution of Lime or Oxalate of Ammonia—indicating absence of Carbonic Acid and Lime. When it is treated with an excess of diluted Nitric Acid and evaporated to dryness, the residue forms, with water, a nearly clear solution, which is only slightly precipitated with Chloride of Barium (indicating a trace of sulphates), and Nitrate of Silver (indicating a trace of chlorides), and is rendered very slightly turbid by Ammonia—indicating a trace of Alumina.

1 fluid ounce contains 27 grains of Hydrate of Potash, and has about the same saturating power as Liquor Sodæ.

### *Medicinal Properties.*

Antacid, diuretic, and antilithic. As an antacid in dyspepsia. Useful in many skin diseases dependent upon a morbid condition of the stomach; given as an alterative in inflammation of the serous membrane attended with fibrinous depositions, as in pleuritis, pericarditis, and periostitis; also in scrofula, syphilis, and chronic rheumatism. Externally as a wash in chronic skin diseases, as a stimulating lotion, and as an escharotic against the bite of rabid or venomous animals.

During a course of this, the urine does not become alkaline, but it does when Carbonate of Potash is taken.

*Dose.*—15 to 60 minims three times a day in Beer, Milk, or Mistura Amygdalæ.

It acts powerfully on all organic matter, converting flannel into a kind of soft jelly after immersion for five or six hours.

INCOMPATIBLES.—Acids, Acidulous Salts, Metallic Salts, the preparations of Ammonia, Belladonna, Henbane, and Stramonium.

ANTIDOTES.—Diluted Acetic Acid, Citric Acid, Lemon Juice, or any vegetable acids, fixed oils, demulcents.

### Not Official.

BRANDISH'S ALKALINE SOLUTION.—American Pearl ashes, 6 lbs.; freshly prepared Quicklime, 2 lbs.; Wood ashes, 2 lbs.; Boiling Water, 6 gallons; or 6, 2, 2, and 60 parts: add first the Lime, then the Pearl ashes, and lastly the Wood ashes to the boiling water, stir well together, let it stand twenty-four hours, and decant the clear liquor.

*Dose.*—½ to 2 drms. in beer or milk. Given for scrofulous tumours.

POTASSA CUM CALCE (Vienna Paste).—Caustic Potash, 5 drms.; Slacked Lime, 6 drms.; Rectified Spirit, sufficient to make a mass. The paste is spread on the part to be cauterized, and is allowed to remain for ten or fifteen minutes, while the surrounding skin is protected by adhesive plaster.

Potassa cum Calce in cylinders of three different sizes, consisting of two parts of

**Potassa** and 1 of Lime, were introduced by Dr. Henry Bennet, and are a suitable form for the use of obstetricians.

U.S. Potassa and Lime, equal weights, rubbed together into a powder.

PASTA CAUSTICA, Russ.—Potassa 3, Lime 1.

## POTASSA SULPHURATA.

### SULPHURATED POTASH.

Solid greenish masses, liver-brown when recently broken, alkaline and acrid to the taste.

*Tests.*—About three-fourths of its weight are dissolved by Rectified Spirit. It forms with water a yellow solution, which has the odour of Sulphuretted Hydrogen, and evolves it freely when excess of Hydrochloric Acid is dropped into it. The acid fluid when boiled and filtered is precipitated yellow by Perchloride of Platinum, and white by Chloride of Barium.

### *Medicinal Properties.*

Irritant, narcotic, and antiseptic. A good remedy, both internally and externally, for scabies; used also for other chronic eruptions, especially lepra and psoriasis.

(In all the Pharmacopœias; U.S.; Belg. and Dan. Hepar Sulphuris; Fr. Sulfure de Potassium; Austr. Ger. and Russ. Kalium Sulphuratum.)

*Dose.*—3 to 8 grs.

### Preparation.

**UNGUENTUM POTASSÆ SULPHURATÆ.** Greenish.

Sulphurated Potash, 30 grs.: triturate, and add prepared Lard, 1 oz.; mix. =(1 in 15½).

This Ointment quickly changes, and should therefore be prepared at the time it is required.

### Not Official.

**BALNEUM SULPHURETUM.**—Sulphurated Potash, 4 ozs.; Water, 30 galls.: dissolve.

This is not quite so agreeable as the Baréges waters, which may be made artificially as follows:—Sulphuret of Sodium, Subcarbonate of Soda, and Muriate of Soda, of each 20 grains to one gallon. But a much stronger solution is often used.

## POTASSÆ ACETAS.

### ACETATE OF POTASH.

$KC_2H_3O_2$, eq. 98.

White, foliaceous, satiny masses, very deliquescent.

Solubility: 3 in 1 of Water; 1 in 1 of Proof Spirit; 1 in 2 of Rectified Spirit.

*Tests.*—Neutral to test-paper. Entirely soluble in Rectified Spirit. Its aqueous solution is unaffected by Sulphide of Ammonium, gives a crystalline precipitate with Tartaric Acid, disengages Acetic Acid on the addition of Sulphuric Acid, and strikes a deep red colour with a dilute solution of Perchloride of Iron.

*Medicinal Properties.*

Advantageously used as a purgative and diuretic in dropsy. It allays sickness in pregnancy, and quiets irritation of the gastric and mucous membrane. It has been used with great success in acute rheumatism.

Best administered in simple solution, with a little Sugar if desired.

*Dose.*—10 to 20 grs. as a diuretic; 120 to 180 grs. as a laxative.

(In all the Pharmacopœias except Austr., which contains a *solution*, sp. g. 1·200; Ger. and Russ. have also a solution, sp. g. 1·176—1·180.)

## POTASSÆ ARSENITIS LIQUOR.

(*Vide* ACIDUM ARSENIOSUM.)

Not Official.

## POTASSÆ BENZOAS.

Solubility, 1 in 1½ of Water; 1 in 18 of Rectified Spirit.

Useful in cystitis with Lithic Acid diathesis.

*Dose.*—15 to 20 grs.

## POTASSÆ BICARBONAS.

BICARBONATE OF POTASH.

**$KHCO_3$**, eq. 100.

In colourless, right rhombic prisms, not deliquescent, of a saline, feebly alkaline taste.

Solubility, 1 in 3 of Water. Insoluble in Rectified Spirit.

*Test.*—50 grains, exposed to a low red heat, leave 34½ grains of a white residue (Carbonate of Potash), which requires for exact saturation 500 grain-measures of the volumetric solution of Oxalic Acid. It effervesces on the addition of diluted Hydrochloric Acid, forming a solution which gives a yellow precipitate with Perchloride of Platinum.

15 grs. of Citric Acid neutralize 20 grains of this salt.

*Medicinal Properties.*

Antacid, antilithic, and diuretic. A powerful alterative, from its rendering the blood and urine strongly alkaline. Used in dyspepsia as an antacid, and in urinary affections where there is a deposition of Uric Acid. Highly useful in acute rheumatism in large and frequent doses.

Closely resembles the carbonate, but without its irritant qualities.

Administered in aërated water or plain bitter infusion.

Brockedon's compressed pills of Bicarbonate of Potash are convenient.

*Does not excite the liver, unless it be given in large doses.—Dr Rutherford.*

*Dose.*—10 to 20 grs. as an antacid or antilithic; 60 grs. as a diuretic. In acute rheumatism, 30 to 40 grs. every four hours, freely diluted.

(Same as Belg. Fr. and U.S.; Ger, and Russ. Kali Bicarbonicum; Dan. Bicarbonas Kalicus; not in Austr.)

### Preparation.

**LIQUOR POTASSÆ EFFERVESCENS.** *Syn.* POTASH WATER. Colourless.

Bicarbonate of Potash, 30 grs.; Water, 20 ozs.: dissolve, and filter the solution, then pass into it as much pure washed Carbonic Acid gas (obtained by the action of Sulphuric Acid on Chalk) as can be introduced by the pressure of seven atmospheres, bottle it, and secure the corks with wires.

*Dose.*—5 to 10 ozs.

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## POTASSÆ BICHROMAS.

### BICHROMATE OF POTASH.

$K_2Cr_2O_7$, eq. 295.

Used to produce the Valerianate of Soda.

Solubility: 1 in 10 of Water.

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## POTASSÆ CARBONAS.

### CARBONATE OF POTASH.

*Syn.* SUBCARBONATE OF POTASH, SALT OF TARTAR, SALT OF WORMWOOD.

Carbonate of Potash, $K_2CO_3$, eq. 138 (with about 16 per cent. of Water of Crystallization).

A white crystalline powder, alkaline and caustic, very deliquescent.

Solubility, 100 in 75 of Water. Insoluble in Spirit.

*Tests.*—Loses about 16 per cent. of its weight when exposed to a red heat. When supersaturated with Nitric Acid and evaporated to dryness, the residue is almost entirely soluble in Water, only a little Silica remaining undissolved. This solution is precipitated only faintly by Chloride of Barium and Nitrate of Silver. 83 grains require for neutralization at least 980 grain-measures of the volumetric solution of Oxalic Acid.

*Medicinal Properties.*

Antacid, antilithic, and diuretic. It is less corrosive than Caustic Potash. Like the bicarbonate, it is diuretic, but inferior to the other salts of Potash—the nitrate, acetate, and bitartrate. As an antilithic it is preferable to the bicarbonate, and if the tendency to lithic discharge be great, about 35 grains, in divided doses, may be given daily. Sometimes a solution is used as an antilithic injection.

*Dose.*—5 to 12 grs.; Brit. Ph. dose, 10 to 30 grs.

(In all the Pharmacopœias.)

Contained in Decoctum Aloes Compositum, Enema Aloes, Liquor Arsenicalis, Mistura Ferri Composita.

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## POTASSÆ CHLORAS.

### CHLORATE OF POTASH.

$KClO_3$, eq. 122·5.

In colourless, inodorous, rhomboidal, crystalline plates, with a cool saline taste. (This Salt ought not to have an odour of Chlorine.)

Solubility, 1 in 16 of cold Water; 1 in 2 of boiling Water.

*Test.*—Its solution is not affected by Nitrate of Silver or Oxalate of Ammonia—indicating absence of Chlorides and Lime. By heat it fuses and gives off an abundance of oxygen gas. Explodes when rubbed in a mortar with Sulphur.

### *Medicinal Properties.*

Stimulant and diuretic, and appears to undergo no change in passing to the kidneys. Useful when the powers of the system require to be roused, as in the low stage of typhus fever, and particularly, for the same purpose, in small-pox and scarlatina. A strong solution, made with hot water, is the best wash for the mouth when the gums are spongy and irritable; it relieves the tenderness and induces a firmness of the gums; it is also an excellent gargle in diphtheria. A solution of ½ drm. in 4 ozs. water, injected into the bladder daily, is a remedy for vesical catarrh. The powder applied to aphthæ in the mouth at once relieves.

(Austr. Ger. and Russ. Kali Chloricum; Belg. and Dan. Chloras Kalicus; Fr. Chlorate de Potasse; U.S.)

*Dose.*—10 to 20 grs. in water three or four times daily.

7 drms. taken by mistake caused death.—*Lancet*, Feb. 8, 1879.

### Preparation.

**TROCHISCI POTASSÆ CHLORATIS.** White, inodorous; pure saline taste.

Each lozenge contains 5 grs. of Chlorate of Potash.

*Dose.*—1 to 6 lozenges.

Lozenges are also made with fruit paste.

(Fr. Tablettes, containing 1½ grs. in each lozenge.)

### Not Official.

GARGARISMA.—Chlorate of Potash, 1 drm.; Honey, ½ oz.; water to 8 ozs.

TROCHISCI.—Pastilles de Dethan are a very agreeable Lozenge of this Salt.

## POTASSÆ CITRAS.

### CITRATE OF POTASH.

$K_3C_6H_5O_7$, eq. 306.

A white powder, of saline, feebly acid taste, and deliquescent.

Solubility, 10 in 6 of Water, 1 in 2 of Glycerine. Insoluble in Proof Spirit.

*Tests.*—Its aqueous solution mixed with solution of Chloride of Calcium remains clear till it is boiled, when a white precipitate separates, readily soluble in Acetic Acid. 102 grains, heated to redness till gas ceases to be evolved, leave an alkaline residue (Carbonate), which requires for exact neutralization 1000 grain-measures of the volumetric solution of Oxalic Acid.

### *Medicinal Properties.*

A refrigerant diaphoretic and mild alkaline laxative. Useful in gout and rheumatism. It is a valuable saline febrifuge, increasing the secretion of the kidneys, and is thus eliminated in the urine, rendering it neutral or alkaline. Given in cases of uric acid gravel; also as a drink in scurvy.

(U.S.; not in others. Russ. have Liquor Kali Citrici.)

*Dose.*—20 to 60 grs. in water.

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## POTASSÆ NITRAS.

### NITRATE OF POTASH.

*Syn.* Nitre, Saltpetre.

$KNO_3$, eq. 101.

Nitrate of Potash of commerce, purified if necessary by crystallization from Solution in Distilled Water. In white opaque masses or fragments of striated, six-sided prisms, colourless, of a peculiar cool saline taste.

Solubility, 1 in 4 of cold water; 1 in 2½ of boiling water.

*Test.*—Its solution is not affected by Chloride of Barium or Nitrate of Silver—indicating absence of Sulphates and Chlorides.

### *Medicinal Properties.*

Refrigerant, diuretic, diaphoretic, and sedative. Useful as a gargle in inflammatory sore throat. It reduces the pulse, and is much used in acute inflammatory diseases; with Tartar Emetic and Calomel it promotes the secretions of the liver and skin. Nitrate of Potash, 5 grs.; Bicarbonate of Potash, 20 grs.; taken, during effervescence, with Citric Acid, 15 grs., in a small tumbler of cold water, is a pleasant cooling draught, and very effectual in lessening febrile excitement.

(In all the Pharmacopœias.)

*Dose.*—5 to 20 grs. as a refrigerant and diuretic; 20 to 30 grs. as a vascular sedative.

Not Official.

Charta Nitrata, Fr. Ger. and Russ.—Soak porous paper in a solution of Nitre, 1 part in four of water, dry it, roll it up, and burn in a candlestick. Used in asthma.

Gargarisma.—Nitre, ½ oz.; Oxymel, 1 oz.: Barley Water, 7 ozs.

For Spray.—Nitre, 15 grs.; Water 1 oz.

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## POTASSÆ PERMANGANAS.

### PERMANGANATE OF POTASH.

$KMnO_4$, eq. 158.

In dark purple, slender, prismatic crystals, inodorous, with a sweet astringent taste.

Solubility, 1 in 16 of Water.

*Test.*—Entirely soluble in cold Water, producing a rich purple colour. 5 grains dissolved in Water require, for complete decoloration, a solution of 44 grains of granulated Sulphate of Iron acidulated with 2 fluid drachms of diluted Sulphuric Acid.

*Medicinal Properties.*

A powerful antiseptic. Given also in diabetes. Externally, as a caustic and deodorizer, to foul ulcers and cancers. Corrects offensive evacuations. Useful in ozæna; it corrected fœtid expectorations when carbolic acid failed.

*Dose.*—1 to 2 grs. three times daily in water, gradually increasing.

(U.S.; Fr.; Austr. Ger. and Russ. Kali Hypermanganicum crystallisatum; Dan. Hypermanganas Kalicus; not in Belg.)

### Preparation.

**LIQUOR POTASSÆ PERMANGANATIS.** Intense purple.

Permanganate of Potash, 4 grs.; Distilled Water, 1 oz.: dissolve. =(1 in 120).

If this needs filtration, gun cotton is best for the purpose.

(Half the strength of Condy's Fluid.)

Diluted with 40 parts water, it is useful as a gargle or as a cleansing wash for diseased surfaces.

*Dose.*—2 to 4 drms.

(U.S. about same as Brit.; not in others.)

INCOMPATIBLES.—Ought never to be put in corked bottles, as it soon becomes decomposed when in contact with any organic substance, animal or vegetable.

## POTASSÆ PRUSSIAS FLAVA.

YELLOW PRUSSIATE OF POTASH.

*Syn.* FERROCYANIDE OF POTASSIUM.

$K_4FeC_6N_6 . 3H_2O$, eq. 442.

Used to prepare Acidum Hydrocyanicum Dilutum.

Solubility: 1 in 4 of Water.

## POTASSÆ SULPHAS.

SULPHATE OF POTASH.

$K_2SO_4$, eq. 174.

In colourless, hard, six-sided prisms, terminated by six-sided pyramids.

Solubility, 1 in 10 of cold Water, 1 in 4 of boiling Water. Insoluble in Rectified Spirit.

*Test.*—Its solution is neutral to test-paper, and is not affected by Oxalate of Ammonia—indicating absence of Lime.

*Medicinal Properties.*

Mildly cathartic, usually operating without irritation. Generally given in combination with Rhubarb. A useful purgative in jaundice and dyspeptic affections.

*Is an hepatic and intestinal stimulant of considerable power. Its action on the liver is, however, uncertain, probably owing to its sparing solubility.—Dr. Rutherford.*

*Dose.*—10 to 20 grs. as an alterative; 60 grs. as a purgative.

(U.S.; Fr. Sulfate de Potasse; Austr. Belg. Ger. and Russ. Kali Sulphuricum; Dan. Sulphas Kalicus.)

Contained in Pilula Colocynthidis Composita and Pulvis Ipecacuanhæ Compositus.

Sulphate of Potash was long known as Sal Polychrestum, and the Bisulphate (the residue from making Nitric Acid) is called Sal Enixum.

### Not Official.

Potassæ Sulphis.—A Salt obtained by saturating a solution of Carbonate of Potash with Sulphurous Acid Gas, and crystallizing it. Solubility, 1 in 3 of water. Dose, 10 grs. in Pyemia.

## POTASSÆ TARTRAS.

TARTRATE OF POTASH.

*Syn.* Soluble Tartar.

$K_2C_4H_4O_6$, eq. 226.

In small, colourless, four or six-sided prisms.

Solubility, 10 in 8 of Water. Insoluble in Rectified Spirit.

*Test.*—Entirely dissolved by its own weight of Water. 113 grains, heated to redness till gases cease to be evolved, leave an alkaline residue (Carbonate), which requires for exact neutralization 1000 grain-measures of the volumetric solution of Oxalic Acid.

### *Medicinal Properties.*

A mild, cooling purgative, operating, like most of the neutral salts, without much pain, and producing watery stools. In smaller doses, diuretic and alterative.

*Dose.*—As a diuretic and alterative, 20 to 60 grs.; as a purgative, 120 to 200 grs.

(U.S.; Fr. Tartrate Neutre de Potasse; Austr. Belg. Ger. and Russ. Kali Tartaricum; Dan. Tartras Kalicus.)

## POTASSÆ TARTRAS ACIDA.

ACID TARTRATE OF POTASH.

*Syn.* Potassæ Bitartras; Cream of Tartar.

$KHC_4H_4O_6$, eq. 188.

An acid salt obtained from the crude Tartar which is deposited during the fermentation of grape juice.

A finely gritty white powder, or fragments of cakes crystallized on one surface, of a pleasant acid taste.

Solubility, 1 in 200 of cold Water, 1 in 18 of boiling Water. Insoluble in Rectified Spirit.

*Test.*—188 grains, heated to redness till gas ceases to be evolved, leave an alkaline residue (Carbonate), which requires for exact neutralization 1000 grain-measures of the volumetric solution of Oxalic Acid.

Some samples contain Tartrate of Lime and Sulphate of Baryta.—*Ph. Jl.* (3) Vol. viii. pp. 350, 467, 595.

*Medicinal Properties.*

Cathartic, diuretic, and refrigerant. Much used in febrile and dropsical affections.

*Dose.*—As a refrigerant or diuretic, 20 to 60 grs.; as an aperient, 60 to 120 grs.; as a hydragogue cathartic, ½ to 1 oz.

(In all the Pharmacopœias.)

Contained in Confectio Sulphuris, Pulvis Jalapæ Compositus.

Not Official.

## TARTARUS BORAXATUS. TARTRATE BORICO-POTASSIQUE. SOLUBLE CREAM OF TARTAR.

Belg. Bitartrate of Potash 3, Borax 1, Water 10.
Dan. Bitartrate of Potash 2, Borax 1, Water 8.
Fr. Bitartrate of Potash 4, Boracic Acid 1, Water 10.
Ger. and Russ. Bitartrate of Potash 5, Borax 2, Water 20.

## PRUNUM.

### PRUNE.

The dried drupe of the plum, *Prunus domestica*, from trees cultivated in Southern Europe.

*Medicinal Properties.*

Nutritious and refrigerant. Rarely prescribed, though often used in domestic medicine as a laxative.

(Belg. Fr. and U.S.; not in others.)

Contained in Confectio Sennæ.

Not Official.

## PRUNI VIRGINIANÆ CORTEX.

### WILD CHERRY BARK.

SYRUPUS.—Bark, 5; Cold Water, 16: infuse 4 hours, then percolate, make up to 16; add Sugar, 28, and shake till dissolved.

Tonic and calming, highly useful in debility of stomach with local irritation.

*Dose.*—2 to 4 drms.

(U.S. with troy weight.)

# PTEROCARPI LIGNUM.

RED SANDAL-WOOD.

The wood of *Pterocarpus santalinus*, from Ceylon; in raspings.

**Used solely as a colouring agent.**

**(Belg. and Fr. Santal Rouge; Dan. Lignum Santali Rubrum; U.S. Santalum; not in Austr. Ger. and Russ.)**

**Contained in Tinctura Lavandulæ Comp.**

# PULVERES.

POWDERS.

The following Powders are contained in the British Pharmacopœia, the formulas of which will be found under the names of the substances from which they are prepared:—

| | Proportions of active ingredients in the whole. |
|---|---|
| PULVIS AMYGDALÆ COMPOSITUS | 8 in 13. |
| PULVIS ANTIMONIALIS | Oxide 1 in 3. |
| PULVIS CATECHU COMPOSITUS | 1 in 2½. |
| PULVIS CINNAMOMI COMPOSITUS | 1 in 3. |
| PULVIS CRETÆ AROMATICUS | about 1 in 4. |
| PULVIS CRETÆ AROMATICUS CUM OPIO | Opium 1 in 40. |
| PULVIS GLYCYRRHIZÆ COMPOSITUS. | |
| PULVIS IPECACUANHÆ COMPOSITUS | Opium 1 in 10. |
| PULVIS JALAPÆ COMPOSITUS | 1 in 3. |
| PULVIS KINO COMPOSITUS | Opium 1 in 20. |
| PULVIS OPII COMPOSITUS | Opium 1 in 10. |
| PULVIS RHEI COMPOSITUS | 1 in 4½. |
| PULVIS SCAMMONII COMPOSITUS | 1 in 2. |
| PULVIS TRAGACANTHÆ COMPOSITUS. | |

# PYRETHRI RADIX.

PELLITORY ROOT. (PELLITORY OF SPAIN.)

The root of *Anacyclus Pyrethrum*, imported from the Levant.

### *Medicinal Properties.*

It is powerfully stimulant to the salivary glands, causing a copious flow of saliva, and, on that account, is so effective in relieving toothache; it has also been useful in paralysis of the tongue.

**(Austr. Belg. Fr. and U.S. same as Brit. Dan. Ger. and Russ. use the root of *Anacyclus officinarum*.)**

### Preparations.

**TINCTURA PYRETHRI.** Light brown.

Pellitory Root, in coarse powder, 4; Rectified Spirit, 20: macerate for forty-eight hours with fifteen of the spirit, agitating occasionally, then pack in a percolator, let it drain, and pour on the remaining spirit; when it ceases to drop, press, filter, and make up with Rectified Spirit to 20. =(1 in 5).

Chiefly used alone or in mixture for relieving toothache.

(Belg. Dan. Fr. and Russ. 1 in 5, by weight; not in others.)

Not Official.

### PYRETHRUM ROSEUM.

The powder of the flower-heads, called "Insect Powder." Keeps away fleas; it also drives away ants if placed in their track.

## PYROXYLIN.

GUN COTTON.

Cotton Wool, 1; Sulphuric Acid, 5; Nitric Acid, 5: mix the Acids, immerse the Cotton, and stir with a glass rod for three minutes, or until it is thoroughly wetted; then remove it, and thoroughly wash out the acid, so that the washings cease to precipitate with Chloride of Barium. Drain on filtering-paper, and dry in a water bath.

*Test.*—Readily soluble in a mixture of Ether and Rectified Spirit. Leaves no residue when exploded by heat.

PREPARATIONS.—Collodium, Collodium Flexile.

The proportions employed by both the U.S. and German Pharmacopœias are, Cotton Wool 1, Sulphuric Acid 8, Nitric Acid (sp. g. 1·420) 7: all by weight. The acids are mixed gradually, and allowed to cool to 80° or 90° F. The cotton is then immersed and thoroughly imbued with the acid by aid of a glass rod, and allowed to macerate for 15 hours; it is first washed with cold water, to remove the acid, and then with boiling water; it is then (pressed Ger.; drained U.S.) and dried on bibulous paper in a water bath.

## QUASSIÆ LIGNUM.

QUASSIA WOOD.

The wood of *Picræna excelsa*, from Jamaica; in raspings and chips.

### *Medicinal Properties.*

Possesses in a high degree the properties of the simple bitters, without astringency. Tonic. Particularly adapted to dyspepsia and in the debility which succeeds acute disease, also as a tonic in intermittents.

(U.S. same as Brit.; Austr. Belg. Dan. Ger. and Russ. use *Quassia Amara*; Fr. use both.)

### Preparations.

**EXTRACTUM QUASSIÆ.** Black.

Quassia, rasped, 1 lb.; Distilled Water, a sufficiency: macerate the

Quassia in 8 ozs. of water for twelve hours, pack in a percolator, add water till the Quassia is exhausted; evaporate the liquor, filter before it becomes too thick, again evaporate by a water bath to a proper consistence for forming pills.

48 ozs. of wood yield 1 oz. of extract.

*Dose.*—3 to 5 grs.

(In all the Pharmacopœias.)

**INFUSUM QUASSIÆ.**

Quassia Wood, in chips, 60 grs.; cold Distilled Water, 10 ozs.: infuse half an hour, and strain. =(1 gr. in 80 minims).

*Dose.*—1 to 2 ozs.

(U.S. 1 in 64; Fr. 1 in 200; not in Austr. Belg. and Ger.)

A good vehicle for iron preparations.

**TINCTURA QUASSIÆ.** Straw colour.

Quassia Wood, in chips, ¾; Proof Spirit, 20: digest seven days, filter, and make up with Proof Spirit to 20. =(1 in 27.)

*Dose.*—1 to 2 drms.

(U.S. 1 in 15; Belg. 1 in 5; Dan. and Fr. 1 and 5; all by weight; not in Austr. Ger. and Russ.)

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## QUERCUS CORTEX.

### OAK BARK.

The dried bark of the small branches and young stems of *Quercus pedunculata*, collected in spring from trees growing in Britain.

*Medicinal Properties.*

A valuable astringent, whether administered internally or applied externally. May be used either generally or topically, in all cases requiring astringents, such as tenderness of the gums; in leucorrhœa, prolapsus, &c.

*Dose.*—Of the powder, 30 to 120 grs.

(In all the Pharmacopœias; Fr. Écorce de Chêne; U.S. Quercus alba and Quercus Tinctoria.)

### Preparation.

**DECOCTUM QUERCUS.**

Oak Bark, bruised, 1¼; Distilled Water, 20: boil ten minutes in a covered vessel, and strain; wash the marc with water to make up 20. =(1 in 16).

*Dose.*—1 to 2 ozs. two or three times daily.

(Belg. 1 in 20; U.S. 1 in 15; Russ. Dec. Quercus Aluminatum; not in others.)

**INCOMPATIBLES.**—Mineral Acids, Alkalies, Metallic Salts, Gelatine, Alkaloids.

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Not Official.

## QUILLAYA SAPONARIA.

The inner bark of the tree; called Soap Bark; it imparts a soapy character to cold water when macerated in it, and is much valued as a wash to cleanse the hair.

TINCTURA.—Bark, 1; Proof Spirit, 5; by percolation. **Mixed with water, forms a nice wash for the hair.**

# QUINIÆ SULPHAS.

## SULPHATE OF QUINIA.

$(C_{20}H_{24}N_2O_2)_2H_2SO_4.\ 7H_2O$, eq. 872.

The sulphate of an alkaloid prepared from Yellow Cinchona Bark, and from the bark of *Cinchona lancifolia*.

(Quinia was discovered by Pelletier and Caventou in 1820.)

100 parts consist of 75 Quinia, 9 Sulphuric Acid, and 16 Water.

Solubility, 1 in 576 of Water, 1 in 112 of Rectified Spirit.

60 grs. require 60 minims of diluted Sulphuric Acid or 100 minims of diluted Phosphoric Acid for solution in 2 ozs. of distilled water.

66 grs. require 60 minims of diluted Nitric Acid for solution in 2 ozs. of water.

*Tests.*—Dissolved in pure Sulphuric Acid, has a feeble yellowish tint, and undergoes no further change of colour when gently warmed. 10 grains, with 10 minims of diluted Sulphuric Acid and half a fluid ounce of Water, form a perfect solution, from which Ammonia throws down a white precipitate. This re-dissolves on agitating the whole with half a fluid ounce of pure Ether, without the production of any crystalline matter floating on the lower of the two strata into which the agitated fluid separates on rest—indicating absence of Quinidia and Cinchonia.

Sulphate of Quinia is prepared with profit only on a large scale. The test given for its purity is a sufficient safeguard to the purchaser.

12 grs. possess the power of one ounce of good bark.

25 grs. of Sulphate of Quinia should lose 3·6 grs. of water by drying at 212°.

If 15 grs. are prescribed with 30 grs. Carb. Ammon. in 6 ozs. of water, it solidifies.

Contained in Ferri et Quiniæ Citras.

INCOMPATIBLES.—All Alkalies and their Carbonates: astringent infusions throw down a Tannate of Quinia, which Sulphuric Acid, instead of dissolving, helps in precipitating. Tinctures do not readily dissolve Quinia; it should be always prescribed in mixtures with a little Nitric Acid, or if preferred in drops, can be made as already directed with either of the Acids, as mentioned above.

### *Medicinal Properties.*

Sulphate of Quinia may be substituted in all cases where Cinchona is applicable, and in the treatment of intermittent fever and ague has almost superseded the bark. Useful in many chronic diseases in which intermissions do not occur, as in chronic and pulmonary catarrh kept up by weakened habit, chronic diarrhœa, scrofulous condition of the system, and every case of direct debility. In neuralgia and in acute lumbago, 2 grains three times a day. 20 grains taken when a fit of epilepsy is coming on will frequently prevent it. For subcutaneous injection, 1 grain neutral Sulphate in 12 minims of water.

The frequent use of Quinine has been known to produce deafness.

When a large dose (say 10 grains) is given, it is best suspended in water; the bitterness is not then so intense as when in solution. The taste of Quinine is covered if taken in sweetened milk—prescribed in pill, syrup, confection, or Glycerine is best. When in mixture, Tincture of Orange and sometimes Spirit of Ether are added to prevent it causing headache. The Infusion of Roses of the Pharmacopœia is a favourite vehicle, but it is always turbid and unsightly: when Pure Quinia, is dissolved in the Infusion of Roses with Nitric Acid (*vide* Rosa Gallica) it is bright and attractive in appearance. But if Sulphuric Acid, or even Sulphate of Quinia, is prescribed in this Infusion, it becomes at once turbid.

*Dose.*—1 to 5 grs. three times daily as a tonic, or in larger doses as an antiperiodic.

(In all the Pharmacopœias; Austr. Ger. and Russ. Chininum Sulphuricum; Dan. Sulphas Chinicus.)

## Preparations.

**PILULA QUINIÆ.**

Sulphate of Quinia, 60 grs.; Confection of Hips, 20 grs.: mix. =(1 in 1⅓).

*Dose.*—2 to 10 grs.

**TINCTURA QUINIÆ.** Light brown.

Sulphate of Quinia, 1; Tincture of Orange Peel, 60: dissolve with a gentle heat, digest for three days with occasional agitation, and filter. =(1 grain in 60 minims).

*Dose.*—1 to 1½ drms.

A good preparation, and a very convenient form to be used by travellers under a course of Quinia.

When it is desired to concentrate this Tincture add to each fluid oz. 16 grs. Sulphate of Quinia and 16 mins. of Diluted Nitric Acid, making it 3 grains to the fluid drachm.

**TINCTURA QUINIÆ AMMONIATA.**

Sulphate of Quinia, 160 grs.; Solution of Ammonia, 2½ fl. ozs.; Proof Spirit, 17½ ozs.: dissolve the Quinia in the Spirit with a gentle heat, and add the Solution of Ammonia. =(1 gr. in 60 minims).

*Dose.*—1 to 2 drms. in a wineglass of water.

When mixed with water the Quinine soon separates, therefore this preparation cannot be prescribed in mixtures.

**VINUM QUINIÆ.** Light brown.

Sulphate of Quinia, 20 grs.; Citric Acid, 30 grs.; Orange Wine, 20 ozs.: dissolve first the Citric Acid and then the Sulphate of Quinia in the wine; digest three days, and filter. =(1 gr. in 480 minims).

*Dose.*—½ to 1 oz.

Not Official.

Quinia.—1 dissolves in 25 of Ether.

Quiniæ Arsenias.—Dose, one-tenth gr.

Quiniæ Carbolas.—Dose, 2 grs. for Diarrhœa.

Quiniæ Citras.—Solubility, 1 in 1000 of water; not soluble in lemon juice.

Quinia Salicylas.—Solubility, sparingly in water, 1 in 24 Rectified Spirit.

'QUINIÆ SULPHAS NEUTR.—Solubility, 1 in 12 of water.

A solution of 1 or 2 grs. to the ounce of Distilled Water applied to the eyes and nostrils for Hay Fever.

QUINIÆ VALERIANAS.—Made by decomposing Muriate of Quinia with Valerianate of Soda. Solubility, 1 in 110 of Cold Water, 1 in 40 of boiling; 1 in 6 of Cold Rect. Spirit; 1 in 1 of boiling; 1 in 14 of Ether.

*Dose.*—1 to 3 grs.

.SYRUP OF DIKINATE OF QUINIA.—Introduced by Dr. Donovan of Dublin. 1 drm. contains 2 grs. of Dikinate of Quinia, which are equal to 3½ ozs. of Decoction of Bark, or 96 grs. of Powdered Bark.

*Dose.*—½ to 1 drm.

SYRUPUS QUINIÆ HYDRIODATIS.—1 grain in each drachm.

An exellent remedy in cases of chronic rheumatism.

*Dose.*—A teaspoonful three times a day.

WARBURG'S TINCTURE FOR MALARIA FEVER.—Dr. Carl Warburg's contains a large amount of Quinine. The formula for this is given in the *Medical Times* for Nov. 13th, 1875, with some interesting cases by Professor Maclean, C.B.

QUINETUM.—The mixed Alkaloids from the E. I. Red Bark. The Sulphate resembles Sulphate of Quinine, and is given in the same dose.

Solubility: in Water sparingly; in Rectified Spirit, 1 in 90.

## RESINA.

### RESIN.

The residue of the distillation of the Turpentines from various species of *Pinus* and *Abies*. Yellow, translucent.

Soluble in its own weight of Oil of Turpentine.

### *Medicinal Properties.*

Important as an ingredient of ointments, but never used internally.

(In all the Pharmacopœias; Belg. Resina Alba; Fr. Poix-resine; Austr. Dan. Ger. and Russ. Resina Pini.)

Contained in Charta Epispastica, Emplastra, and Unguentum Terebinthinæ.

### Preparations.

**EMPLASTRUM RESINÆ.** Pale yellow.

Resin, in powder, 2; Litharge Plaster, 16; Hard Soap, 1: melt the Plaster with a gentle heat, add the Resin and Soap, first liquefied, and mix. =(1 in 9½).

(Belg. and U.S. Resin 1, Lead Plaster 6; Dan. Emplastrum Citrinum; Resin 6, Yellow Wax 4, Suet 2, common Turpentine 1; Ger. and Russ. Emplastrum Resinæ Pini, Resin 2, Yellow Wax 4, Suet 1, common Turpentine 1.)

Used chiefly for strapping wounds and ulcers.

**UNGUENTUM RESINÆ.** Dusky yellowish-brown.

Resin, in coarse powder, 2; Yellow Wax, 1; Simple Ointment, 4:

melt with a gentle heat, strain while hot through flannel, and stir till cool. =(1 in 3½).

(Ung. Basilicum; Dan. Fr. Ger. and Russ. are all different.)

A stimulating dressing for indolent ulcers.

## RHAMNI SUCCUS.

### BUCKTHORN JUICE.

The recently expressed juice of the ripe berries of Common Buckthorn, *Rhamnus catharticus*. 7 lbs. of Berries yield nearly 2 lbs. of Juice.

### *Medicinal Properties.*

A powerful cathartic, producing many watery evacuations and sometimes severe tormina. Given in dropsy, but, on account of its severity of operation, is not much used.

### Preparation.

**SYRUPUS RHAMNI.** Deep red; crystallizes on keeping.

Buckthorn juice, 80; Ginger, sliced, ¾; Pimento, buised, ¾; Refined Sugar, 80, or a sufficiency; Rectified Spirit, 6: evaporate the juice to 50, add the Ginger and Pimento, digest at a gentle heat for four hours, and strain; when cold add the spirit, let the mixture stand for two days, then decant off the clear liquor, and in this dissolve the sugar with a gentle heat, so as to make the sp. g. 1·32.

*Dose*—1 drm.

(Belg. Juice 15, Sugar 10, evaporate to consistence of syrup; Fr. Sirop de Nerprun, Juice 10, Sugar 10, evaporate to sp. gr. 1·270; Ger. Clarified Juice 5, Sugar 9; not in others.)

Not Official.

## RHAMNUS FRANGULA.

Black or berry-bearing Alder. The bark is employed as a purgative for delicate constitutions and the aged. Said to be without the irritating properties some aperients possess.

**Extractum Fluidum.**—Bruised Bark, 16 ozs.; Water, *q. s.*; Rectified Spirit, 2 ozs.: boil the bark in successive portions of water till exhausted, evaporate the decoctions till only 14 ozs. remain, add the Spirit, filter, and make up to 16 ozs.

*Dose.*—2 to 4 drms.; 1 drm. for a child.

**Decoctum.**—Bruised Bark, 1 oz.; Water, 40 ozs.: boil to 20 ozs.

*Dose.*—2 or 3 tablespoonfuls night and morning.

## RHATANIA. *See* KRAMERIA.

# RHEI RADIX.

## RHUBARB ROOT.

The dried root deprived of its bark, from one or more undetermined species of *Rheum*, from China, Chinese Tartary, and Thibet. Imported from Shanghai and Canton.

*Test.*—Free from decay, not worm-eaten, Boracic Acid does not turn the yellow exterior brown. In the powder, adulterations are detected with difficulty.

### *Medicinal Properties.*

Cathartic and astringent, the latter property not interfering with the former, as the purgative effect precedes the astringent. Used in dyspepsia attended with constipation; in diarrhœa when purging is indicated; in the second stage of cholera infantium; in chronic dysentery, and in typhous diseases when cathartic medicine is necessary. It is non-irritant, and increases the effect of other cathartics.

*Is a certain though not powerful hepatic stimulant.—Dr. Rutherford.*

4 grains of Powdered Rhubarb and 1 minum of Glycerine make a nice pill.

*Dose.*—As a stomachic, 1 to 5 grs. of the powder: as a purgative, 10 to 20 grs.

(In all the Pharmacopœias.)

The *Rheum Ponticum* is grown at Banbury, in Oxfordshire. In four or five years the roots attain the size of a man's arm; in drying it loses 75 per cent., and yields a fine yellow powder. A good deal is exported, and perhaps a little is used here.

Bicarbonate of Soda in equal weight with Powdered Rhubarb takes off the astringency, and covers the taste; the addition of Peppermint Water still further hides it; or 1 drop of Oil of Peppermint, 30 grs. of Sugar, will disguise the taste of 15 grs. of Powdered Rhubarb. 1 drop Oil of Nutmeg, 30 grs. Sugar, and 10 grs. of powdered Rhubarb, make a pleasant draught.

### Preparations.

**EXTRACTUM RHEI.** Intense reddish-brown, with powerful Rhubarb odour.

Rhubarb Root, sliced or bruised, 8; Rectified Spirit, 5; Distilled Water, 50: mix and macerate four days, decant, press, and allow to settle; pour off the clear liquor, filter the remainder, mix, and evaporate by a water bath, not exceeding 160° F., to a proper consistence for forming pills.

Good Rhubarb yields 39 per cent. of Extract.

*Dose.*—3 to 6 grs. Brit. Ph. dose, 5 to 20 grs.

(Belg. Dan. Fr. and Russ. with water only; Ger. with Spirit and water mixed; U.S. with Alcohol.)

**INFUSUM RHEI.**

Rhubarb Root, in thin slices, 1; boiling Distilled Water, 40: infuse one hour, and strain. =(1 in 40).

*Dose.*—1 to 2 ozs.

(U.S. 1 to 32; Belg. 1 to 15, cold; Fr. 1 in 200 cold; not in others.)

**PILULA RHEI COMPOSITA.** Intense brown.

Rhubarb Root, in fine powder, 3 ozs.; Socotrine Aloes, in fine powder,* 2½ ozs.; Myrrh, in fine powder, 1½ ozs.; Hard Soap, in powder, 1½ ozs.; English Oil of Peppermint, 1½ drms.; Treacle, by weight, 4 ozs.: mix the powders with the Oil, add the Treacle, and beat into a mass.

*Dose.*—5 to 10 grs.

(Fr. gives Brit. formula; U.S. contains neither Soap nor Treacle; not in others.)

**PULVIS RHEI COMPOSITUS.** Yellowish cream colour.

Rhubarb Root, in powder, 2; Light Magnesia, 6; Ginger, in powder, 1: mix. =(1 in 4½).

The original Dr. Gregory's Powder.

*Dose.*—30 to 60 grs. 5 to 10 grs. for children.

(Same as U.S.; Fr. gives Ger. formula; Ger. Pulvis Magnesiæ cum Rheo, Carb. Magnes. 60, Sacch. 40, Rhei 15, Ol. Fœnic. 1⅓; Dan. Carb. Magnes. 1, Sugar 1, Rhubarb 1, Oil of Fennel $\frac{1}{100}$; Belg. and Russ. Carb. Magnes. 4, Sugar 2, Rhubarb 1, Oil of Fennel $\frac{1}{25}$.)

**SYRUPUS RHEI.** Intense brown.

Rhubarb Root, in coarse powder, 2; Coriander Fruit, in powder, 2; Refined Sugar, 24; Rectified Spirit, 8; Distilled Water, 24: mix the Rhubarb and Coriander, pack them in a percolator, pass the spirit and water, previously mixed, slowly through them, evaporate the liquid that has thus passed until it is reduced to 13, and in this, after it has been filtered, dissolve the Sugar with a gentle heat.

*Dose.*—1 to 4 drms.

(Fr. Sirop de Rhubarbe Composé; Belg, Syr. Rhei, and Syr. Rhei Compositus; U.S. Syr. Rhei and Syr. Rhei Aromaticus; Ger. and Russ. with Cinnam. and Carb. of Potash; Austr. and Dan. with Carb. of Potash; all differ from Brit.)

**TINCTURA RHEI.** Intense brown; deposits slightly when kept.

Rhubarb Root, bruised, 2; Cardamom Seeds, freed from the pericarps, bruised, ¼; Coriander, bruised, ¼; Saffron, ¼; Proof Spirit, 20: macerate for forty-eight hours with 15 of the spirit, agitating occasionally, pack in a percolator, and when it ceases to drop, pour on the remaining spirit, press the marc, filter, and add proof spirit to make up 20. =(1 in 10).

*Dose.*—As a stomachic, 1 to 2 drms.; as a purgative, ½ to 1 oz.

(Belg. and Fr. Rhubarb only, 1 in 5 by weight; Fr. has also the formula of the Brit. Ph.; U.S. Rhubarb 3 troy ozs., Cardamom ½ troy oz. Diluted Alcohol 32 fl. ozs.)

**VINUM RHEI.** Deep maroon; deposits very much when kept.

Rhubarb Root, in coarse powder, 1½ oz.; Canella Bark, in coarse powder, 60 grs.; Sherry, 20 ozs.: macerate seven days, filter, and add Sherry to make up 20. =(about 1 in 14).

*Dose.*—1 to 2 drms.

(U.S. about 1 in 7; Belg. 1 in 7; Fr. 3 in 50; Austr. Ger. and Russ. Tinct. Rhei Vinosa with Orange Peel and Cardamoms; Dan. 1 in 10 with Cardamoms and Gentian.)

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* Some physicians prefer the aqueous extract of Aloes.

Not Official.

**Extractum Rhei Comp.**, Ger. and Russ.—Ext. Aloes, 1; Ext. Rhei, 3; Jalapini Saponis, 1; Water, 4; Spt., 4: misce secundum artem.

## RHŒADOS PETALA.

### RED POPPY PETALS.

The fresh petals of *Papaver Rhœas*; from indigenous plants.

*Medicinal Properties.*

Of feeble opiate powers; chiefly used on account of its colouring property.

(In all the Pharmacopœias; Fr. Coquelicot.)

### Preparation.

**SYRUPUS RHŒADOS.** Deep red; crystallizes when kept.

Fresh Red Poppy Petals, 13; Refined Sugar, 36; Distilled Water, 20, or a sufficiency; Rectified Spirit, 2½: add the petals gradually to the water, heated in a water bath, frequently stirring, remove the vessel, and macerate twelve hours, press out the liquor, strain, add the Sugar, and dissolve by heat; when nearly cold, add the spirit, and Distilled Water to weigh 58, and measure 43½; sp. g. 1·330. =(1 in 3⅓).

*Dose.*—1 to 2 drms.

(Ger. fresh Petals 12, Sugar 36, water 20; Belg. Dan. Fr. and Russ. all different strengths; not in Austr. and U.S.)

## RICINI OLEUM.

### CASTOR OIL.

The Oil expressed from the seeds of *Ricinus communis*, imported chiefly from Calcutta. Pale straw. Sp. g. 0·96.

It is also obtained by decoction, and by the agency of Alcohol.

*Test.*—Entirely soluble in one volume of absolute Alcohol, and in two volumes of Rectified Spirit; in all proportions with Oil of Turpentine.

*Medicinal Properties.*

A mild and speedy cathartic. Particularly applicable to constipation from indurated fæces, or after swallowing acrid substances, or on the accumulation of acrid secretions. Used in diseases attended with irritation or inflammation of the bowels, as colic, diarrhœa, dysentery, and enteritis. The safest cathartic for infants, to whom a larger relative dose than to adults may be given, probably from their digesting more of the Oil. An enema may be made of 2 or 3 ounces, with some mucilaginous fluid.

*Stimulates the intestinal glands, but not the liver.—Dr. Rutherford.*

*Dose.*—½ to 1 oz. for adults, 1 to 3 drms. for infants.

(In all the Pharmacopœias.)

Contained in Collodium Flexile, Linimentum Sinapis Comp., Pil. Hydrarg. Subchloridi.

EMULSIONES.—Castor Oil, ½ oz.; Mucilage, ½ oz.; Syr. Ginger, ¼ oz.; Cinnamon Water, 1 oz.: mix.

Castor Oil, ½ oz.; yolk of Egg, ¼ oz.; Syrup, ¼ oz.; Peppermint Water, 1 oz.: mix.

One of the least disagreeable modes of taking Castor Oil is to pour, say a tablespoonful of it, on the same quantity of water, and a teaspoonful of Whisky or Brandy on the whole.

A nice Emulsion for children is, Castor Oil, 2 drms.; solution of Potash, 20 mins.; Syrup, 5 drms.; Water to 2 ozs. Dose, 2 teaspoonfuls.

Not Official.

The decoction of the leaves of *Ricinus* applied to the breast is said to produce an abundant supply of milk.

## ROSÆ CANINÆ FRUCTUS.

FRUIT OF THE DOG ROSE. HIPS.

The ripe fruit of *Rosa canina;* indigenous.

*Medicinal Properties.*

Slightly refrigerant and astringent. Chiefly used in confection, also as a pill basis, and for making electuaries and linctuses.

(Belg. and Fr. Cynorrhodon; not in others.)

### Preparation.

**CONFECTIO ROSÆ CANINÆ.** Yellowish-brown.

Hips, deprived of their seeds, 1; Refined Sugar, 2: beat the hips to a pulp in a stone mortar, rub the pulp through a sieve, add the sugar, and mix thoroughly. =(1 in 3).

*Dose.*—60 grs. or more.

(Belg. and Fr. Conserva Cynorrhodi; not in others.)

Used for Pilula Quiniæ.

## ROSÆ CENTIFOLIÆ PETALA.

CABBAGE-ROSE PETALS.

The fresh petals, fully expanded, of *Rosa centifolia;* from plants cultivated in Britain.

*Medicinal Properties.*

Slightly laxative, and sometimes given with cathartics, but chiefly used in the preparation of rose-water.

(In all the Pharmacopœias; Fr. Rose Pâle; Ger. Flores Rosæ.)

### Preparation.

**AQUA ROSÆ.**

Fresh Petals, 1; Water, 2: distil 1. =(1 in 1).

An agreeable vehicle for medicines; employed in making lotions.

*Dose.*—1 to 2 ozs.

(Same as Fr.; Dan. 1 in 3; Ger. 1 in 5; Austr. and Russ. with Otto; U.S. and Belg. 1 in 2½.)

An equivalent quantity of petals, preserved whilst fresh with common salt, may be used.

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## ROSÆ GALLICÆ PETALA.

### RED ROSE PETALS.

The unexpanded petals of *Rosa Gallica*, fresh and dried; cultivated in Britain.

### *Medicinal Properties.*

Astringent. Often used on account of their colouring matter.

(In all the Pharmacopœias except Austr. and Ger.)

### Preparations.

**CONFECTIO ROSÆ GALLICÆ.** Violet.

Fresh Red Rose Petals, 1; Refined Sugar, 3: beat the petals to a pulp in a stone mortar, add the Sugar, and rub well together. =(1 in 4).

Used as a pill basis. Applied to aphthous conditions of the mouth as a linctus.

*Dose.*—30 to 60 grs., or more.

(Belg. and Fr. with powdered Petals, Sugar, and Rose Water; U.S. with powdered Petals, Sugar, Honey, and Rose Water; not in others.)

**INFUSUM ROSÆ ACIDUM.**

Dried Red Rose Petals, broken up, 1; Diluted Sulphuric Acid, ½; boiling Distilled Water, 40: infuse for half an hour with the acid and water; strain. =(1 in 40).

A similar infusion was in use in 1674.

Astringent. An excellent vehicle for more powerful medicines. An agreeable gargle; but Borax and Alkalies change the colour to green.

*Dose.*—1 to 2 ozs.

(U.S. made with Sugar; Fr. 1 in 100, without acid; not in others.)

**SYRUPUS ROSÆ.** Red.

Dried Red Rose Petals, 1; Refined Sugar, 15; boiling Distilled Water 10: infuse the Petals in the Water two hours, squeeze through calico, heat the liquor to the boiling-point, and filter; add the Sugar, and dissolve with heat. The product should weigh 23, and measure 17¼. Sp. g. 1·335. =(1 in 17¼).

Mildly astringent. Used to add to mixtures on account of its colour.

*Dose.*—1 to 2 drms.

(Russ. 3 times stronger; Fr. Sirop de Roses pâles; Belg. 1 in 10; U.S. with Spirit and percolation; not in others.)

Not Official.

INFUSUM ROSÆ CUM ACIDO NITRICO.—Rose Petals, broken small, 2; Diluted Nitric Acid, ½; cold Distilled Water, 40: infuse two hours, frequently stirring, strain, and add Powdered Sugar, 1. Used for Quinine draughts.

Neither Sulphuric Acid nor a neutral Sulphate may be prescribed with Quinine in this infusion, for with either it will become turbid.

## ROSMARINI OLEUM.

### OIL OF ROSEMARY.

*Syn.* OLEUM ANTHOS.

The Oil distilled from the flowering tops of *Rosmarinus officinalis*. Pale straw. That distilled in Britain is superior to the imported.

Sp. g. 0·911, reduced to 0·886 by rectification.

Solubility, 1 in 1 of Rectified Spirit.

Contained in Linimentum Saponis, Tinctura Lavandulæ Composita.

### *Medicinal Properties.*

A powerful stimulant. Used in hysteria and nervous headaches; externally as a rubefacient, and for its odour.

*Dose.*—2 to 5 minims, in pill, sugar, or emulsion.

(In all the Pharmacopœias; Fr. Huile Volatile de Romarin; Dan. Ætheroleum Rosmarini.)

### Preparation.

**SPIRITUS ROSMARINI.** Colourless.

Oil of Rosemary, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

(Austr. Fr. and Ger. from flowering tops, Essentia Rosmarini; Russ. 1 in 96; not in others.)

*Dose.*—12 to 30 minims.

## RUTÆ OLEUM.

### OIL OF RUE.

The Oil distilled from the fresh herb of *Ruta graveolens*. Pale straw.

### *Medicinal Properties.*

Stimulant and antispasmodic. Given in hysteria, convulsions, and amenorrhœa. A powerful topical stimulant and rubefacient.

*Dose.*—2 to 6 minims in emulsion.

(Belg. Fr. Russ. and U.S.; not in others.)

Not Official.

CONFECTIO.—Fresh Leaves, 1; Refined Sugar, 3: beat into a mass.

ENEMA.—2 to 4 drms. of Confection; warm Water, 10 oz.: administered in puerperal peritonitis, and for flatulent distension in children.

Syrupus Rutæ.—1 minim oil to each ounce of Syrup. *Dose.*—½ to 1 drm. for a child.

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## SABADILLA.

### CEVADILLA.

The dried fruit of *Asagræa officinalis*, imported from Vera Cruz and Mexico.

*Medicinal Properties.*

An acrid, drastic emeto-cathartic, operating occasionally with great violence; used as an anthelmintic in tænia, but Male Fern and other remedies are safer and equally effective. May be used cautiously for pediculi.

Chiefly introduced into the Pharmacopœia for the purpose of making Veratria.

*Dose.*—In powder, 4 to 6 grs.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

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## SABINÆ CACUMINA.

### SAVIN TOPS.

The fresh and dried tops of *Juniperus Sabina*, collected in spring from plants cultivated in Britain.

*Medicinal Properties.*

A powerful local and general stimulant, diaphoretic, emmenagogue, and anthelmintic; used occasionally in gout and chronic rheumatism. The dried leaves, or powder, externally as a local stimulant or escharotic, applied to warts, flabby ulcers, etc. The expressed juice diluted, or an infusion, as a lotion for gangrenous sores, scabies, and tinea capitis.

*Dose.*—In powder, 5 to 10 grs. two or three times daily; the powder and tincture are convenient forms of administration.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

### Preparations.

**OLEUM SABINÆ.** Pale straw.

The Oil distilled in Britain from fresh Savin, sp. g. 0·915.

*Dose.*—1 to 5 minims.

(Belg. Ger. Russ. and U.S.; not in others.)

**TINCTURA SABINÆ.** Deep greenish-brown.

Savin Tops, recently dried and coarsely powdered, 1; Proof Spirit, 8: macerate forty-eight hours, with 6 of the spirit, agitating occasionally; pack in a percolator, and when it ceases to drop, pour on the remaining spirit, press and filter, and add proof spirit to make up 8. =(1 in 8).

*Dose.*—15 to 30 minims.

(Belg. 1 in 5; Russ. 1 and 10; both by weight.)

**UNGUENTUM SABINÆ.** Pea-green.

Fresh Savin Tops, bruised, 8; Yellow Wax, 3; Prepared Lard, 16: melt the lard and the wax together on a water bath, add the Savin, digest twenty minutes, strain and press through calico. =(1 in $3\frac{3}{8}$).

Should be freshly prepared, as it does not keep.

To keep up suppuration from a blister or issue by preventing it from healing, and for application to indolent ulcers.

(Belg. Savin Tops 4 in 10; Dan. Savin Tops 4, Spirit 8, Lard 12, Yellow Wax 3; Ger. Extract 1, Wax Ointment 9; Russ. Extract 1, Spirit 1, Lard 9; not in others.)

**Antidotes.**—In case of poisoning by Savin, emetics should first be given; Castor oil, Linseed poultices to the abdomen, opiates and demulcents.

# SACCHARUM PURIFICATUM.

## REFINED SUGAR.

$C_{12}H_{22}O_{11}$, eq. 342.

Pure Cane Sugar prepared from the juice of the stem of *Saccharum officinarum;* from plants cultivated in the West Indies and other tropical countries. White.

Solubility: 100 in 45 of Water measures 113; 1 in 100 of Rectified Spirit.

### *Medicinal Properties.*

Demulcent, used in catarrhal affections in the form of candy, syrup, etc. Employed in pharmacy to render oils miscible with water. Enters into the composition of several mixtures and pills, and all the confections, syrups, and lozenges.

### Preparation.

**SYRUPUS.** Colourless.

Refined Sugar, 6; Distilled Water, 3: dissolve the sugar in the water with the aid of heat, and when cool add water to weigh 9, and measure very nearly 7. Sp. g. 1·330. =(1 in $1\frac{1}{6}$).

(In all the Pharmacopœias.)

It is convenient to remember that 7 measures of Syrup contain 6 of Sugar.

# SACCHARUM LACTIS.

## SUGAR OF MILK.

$C_{12}H_{24}O_{12}$, eq. 360.

Crystallized Sugar obtained from the Whey of Cows' Milk by evaporation; manufactured largely in Switzerland. White.

Solubility, 1 in 5 of Cold Water; 1 in 3 of Boiling Water; slightly soluble in Rectified Spirit.

### *Medicinal Properties.*

As a non-nitrogenous article of diet in consumption and other pulmonary diseases, and in cases of extreme irritability of the stomach, following profuse loss of blood. Used to mix with the food of children; dissolved in water, and mixed with cows' milk, it forms a good substitute for that of the mother. Useful for rubbing with strong medicinal powders, in order to divide them.

*Dose.*—60 to 120 grs. or more, in water.

(In all the Pharmacopœias.)

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Not Official.

## SALEP.

The prepared tubers of Orchis Moris, and other species of Orchis.

(Austr. Belg. Dan. Fr. Ger. and Russ.)

Mucilago. Salep. (Belg. Ger. and Russ.)—Powdered Salep 1: agitate well with Cold water 10; pour on to this, Boiling water 90, and stir till cold.

(Dan. same strength, but containing Syrup of Poppies.)

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Not Official.

## SALICINUM.

### SALICIN.

$C_{13}H_{18}O_7$, eq. 286.

A neutral substance obtained from the bark of the *Salix alba*.

In silky acicular crystals and laminæ, bitter, inodorous, white. Strong Sulphuric Acid reddens it.

Solubility, 1 in 28 of Water.

*Medicinal Properties.*—Tonic, analogous to those of the Sulphate of Quinia, and less liable to irritate the stomach; employed in dyspepsia and intermittent diseases, and specially recommended in acute rheumatism, in doses of 5 to 30 grs. *B. M. Journ.* May 20, 1876.

*Dose.*—5 to 10 grs.

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## SAMBUCI FLORES.

### ELDER FLOWERS.

The fresh flowers of *Sambucus nigra*, from indigenous plants.

### *Medicinal Properties.*

Mildly stimulant. Externally, as a discutient, in the form of poultice, fomentation, or ointment. Essence or strong water as a cosmetic.

Scent much disliked by insects; bruised leaves of Elder in the hat and rubbed on the face prevent flies settling on the person.

### Preparation.

**AQUA SAMBUCI.**

Fresh Elder flowers, separated from the stalks, 1; Water, 2: distil 1.

Or an equivalent quantity of flowers preserved whilst fresh with common salt. =(1 in 1).

(Belg. 3 in 10; Fr. Eau de Sureau, with dried flowers, 1 in 4; Dan. 1 in 10; Ger. 1 in 10, also Concentrated, 1 in 1; Russ. concentrated only; not in others.)

Chiefly used as a perfume; it is, however, a pleasant vehicle for medicines, and may be used for lotions.

There is always a large quantity of vegetable matter in this water, which, causing it to become acid, impairs its odour. In practice it is better to distil it of double strength and dilute it when required.

### Not Official.

UNGUENTUM.—Elder Flowers, fresh, and Lard, equal parts: melt the Lard, add the Flowers, continue the heat, stir for ten minutes, and strain.

A cool, soothing application to irritable sores, but the reverse if allowed to grow rancid.

UNGUENTUM VIRIDE.—*St. George's.* Ointment of Elder Leaves, 1 drm.; Elemi Ointment, 1 oz.; Copaiba, 1½ drms.

Excellent for sloughing sores.

### Not Official.

## SANTALI FLAVI OLEUM.

The Essential oil obtained from Sandal wood (*Santalum Album*) is prescribed for Gonorrhœa.

*Dose.*—Thirty minims, rubbed down with mucilage ʒi; adding Syrup ʒi; and Tincture of Orange ʒss., Water ℥ss., three times a day.

## SANTONICA.

The unexpanded flower-heads of an undetermined species of *Artemisia*, imported from Russia.

*Dose.*—10 to 60 grs.

(Used to prepare Santoninum.)

## SANTONINUM.

### SANTONIN.

$C_{15}H_{18}O_3$, eq. 246.

A crystalline neutral principle, obtained from Santonica (or *Semen contra**).

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* *Semen contra* is not a seed, but the unexpanded flower-heads of a species of *Artemisia*, Floris Cina, imported from Russia, and is the only so-called worm-seed which yields Santonin in quantity worth extracting.

In colourless, flat, rhombic prisms, feebly bitter.

Solubility, 1 in 50 of Rectified Spirit. Sparingly soluble in Water.

*Test.*—Not dissolved by diluted mineral acids. Entirely destructible by a red heat with free access of air.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

*Medicinal Properties.*

Anthelmintic. Tasteless whilst in a crystalline form, and thus given it is a pleasant vermifuge for children. Useful both against tape-worm and thread-worms. Said to have been used with success in intermittents.

*Dose.*—2 to 3 grs. for children.

About three doses are sufficient; one every other night, followed by a brisk cathartic the morning after each dose.

It frequently affects the vision, causing all objects to appear green.

First introduced by Mr. Spencer Wells.

Not Official.

Trochisci.—Dan. ½ gr. in each; Ger. 5 centigrammes and 25 milligrammes in each.

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# SAPO.

SOAP.

Soaps embrace all those compounds which result from the reaction of salifiable bases with fats and oils.

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## SAPO ANIMALIS.

CURD SOAP.

A Soda Soap made with purified animal fat, consisting principally of stearin.

A more definite description would have been a Soda Soap made with tallow, as melted from the fat of sheep and oxen, containing about 60 per cent. of stearin, quite white, inodorous, or having a sweet odour. Soluble in water or spirit, hot or cold, slightly alkaline, not greasy. The basis of all toilet soaps.—Ed.

The additions to the Brit. Pharm. state that this soap may with advantage be substituted for the hard soap in preparing the Linimentum Potassii Iodidi cum Sapone.

The Author thinks this a mistake, because the Liniment made with Curd Soap differs widely from that made with hard Soap, and may cause complaints from patients.

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## SAPO DURUS.

HARD SOAP.

Soap made with Olive Oil and Soda.

*Test.*—Soluble in Rectified Spirit. Brit. Ph.

The Author finds that of 30 grains of White Castile Soap digested for four days in 1 ounce of cold Rectified Spirit, only 24 grains are dissolved; when heated it all dissolves.

The Sapo Durus of the Pharmacopœia refers, without doubt, to the White Castile Soap; Curd Soap cannot be substituted for this, for it is not simply a combination of Olive Oil and Soda, but is a compound of Mutton-fat with Soda, and if used in any preparations of the Pharmacopœia, produces a result widely different from that of White Castile Soap. There are different makers of White Castile Soap in Marseilles; those soaps branded "Fabricius Paranque" or "Honore Arvanon" answer for making Lin. Pot. Iod. c. Sapone.

### *Medicinal Properties.*

Laxative, antacid, and antilithic. Combined with Rhubarb, it is administered in dyspepsia attended with constipation and torpor of the liver. Large and frequent doses, wrapped in wafer paper, are most effective in removing gall-stones.

*Dose.*—5 to 15 grs.

(In all the Pharmacopœias, Sapo Medicatus; Fr. Savon Blanc.)

## Preparations.

**EMPLASTRUM CERATI SAPONIS.** Dusky-brown.

Hard Soap, in powder, 10; Yellow Wax, 12½; Oxide of Lead (in powder), 15; Olive Oil, 20; Vinegar, 160: boil the vinegar with the Oxide over a slow fire, or by a steam-bath, constantly stirring them until they unite; then add the soap, and boil again in a similar manner until all the moisture is evaporated: lastly, mix with the wax previously dissolved in the oil, and continue the process till the product takes the consistence of a plaster.

**EMPLASTRUM SAPONIS.** Dusky-white.

Hard Soap, in powder, 6; Lead Plaster, 36; Resin, in powder, 1: to the lead plaster, previously melted, add the soap and the resin, first liquefied; then, constantly stirring, evaporate to a proper consistence. =(1 of soap in 7⅛).

(Belg. 1 in 15; Fr. about 1 in 18, also with Camphor; U.S. 1 in 10; Austr. Empl. Saponatum, 1 in 16; Dan. 1 in 11½; Ger. and Russ. 1 in 15; all with Wax and Camphor.)

Equal weights of Emplastrum Plumbi and Emplastrum Saponis spread on Amadou are useful to shield any part of the foot from pressure of the boot.)

**LINIMENTUM SAPONIS.** Faint straw colour.

Hard Soap, cut small, 2½ ozs.; Camphor, 1¼ ozs.; Oil of Rosemary, 3 drms.; Rectified Spirit, 18 ozs.; Distilled Water, 2 ozs.: mix the water with the spirit, add the other ingredients, digest at a temperature not exceeding 70° F., agitating occasionally for seven days, and filter. There remains on the filter about one-fifth of the soap employed. =(1 in 10 nearly).

The temperature 70° F. was introduced in Brit. Ph. 1864, because it was found that when this temperature was exceeded, the liniment was always more or less gelatinous in cold weather, and could not be rendered bright again by warmth.

(U.S. about 1 in 10; Fr. Lin. Savonneux 1 in 10, also Brit. Ph. formula; Linimentum Saponato-Camphoratum Liquidum, Austr. 1 in 5, Belg. 1 in 8, Ger. 1 in 9, Russ. 1 in 7⅔.)

Contained in Linimentum Opii.

**PILULA SAPONIS COMPOSITA.** *See* OPIUM.

1 gr. Opium powder in 6 nearly.

### Not Official.

GLYCERINE SOAP.—There are several makers in this country and on the continent. The soaps are transparent and pleasant to use.

JUNIPER TAR SOAP, BRECKNELL'S PURE YELLOW SOAP, OXIDE OF ZINC SOAP, CARBOLIC ACID SOAP, are occasionally prescribed for skin diseases.

STEER'S OPODELDOC is solid, and made as directed for Arnica Opodeldoc, substituting Sp. Rosemary for Tinct. Arnica. *See* ARNICA, page 57.

## SAPO MOLLIS.

### SOFT SOAP.

Soap made with Olive Oil and Potash.

A transparent soft solid of a greenish-yellow colour.

*Test.*—Soluble in Rectified Spirit; not imparting an oily stain to paper.

Contained in Linimentum Terebinthinæ.

## SARSÆ RADIX.

### JAMAICA SARSAPARILLA.

The dried root of *Smilax officinalis*, native of Central America, imported from Jamaica. Brought into Europe about 1630.

### *Medicinal Properties.*

Alterative and tonic. It is of especial service in secondary syphilis, alone or in combination with other remedies. Also in chronic rheumatism, with sudorifics and anodynes, and in cachectic diseases, chronic abscesses attended with profuse discharge, and many maladies connected with a depraved state of the system.

The virtues of Sarsaparilla have been much disputed, on account of the difficulty of explaining its action; but good Jamaica Sarsaparilla doubtless possesses the qualities described above.

(In all the Pharmacopœias.)

INCOMPATIBLES.—Alkalies which accelerate its decomposition.

### Preparations.

**DECOCTUM SARSÆ.**

Jamaica Sarsaparilla, cut transversely, 1; boiling Distilled Water, 12: digest for an hour, boil ten minutes, cool, strain, and add water to make up 8. The product should measure 8. =(1 in 8).

*Dose.*—½ to 1 pint daily, in divided doses.

(Belg. 1 in 10; not in others.)

**DECOCTUM SARSÆ COMPOSITUM.**

Jamaica Sarsaparilla, cut transversely, 2½ ozs.; Sassafras Root, in chips, ¼ oz.; Guaiacum Wood turnings, ¼ oz.; fresh Liquorice Root, ¼ oz.; Mezereon Bark, 60 grs.; boiling Distilled Water, 30 ozs.: digest for one hour, boil ten minutes, cool and strain. The produce should measure 20 ozs. =(1 in 8).

*Dose.*—½ to 1 pint daily, in divided doses.

(Fr. gives Brit. formula; U.S. 1 in 10; Austr. and Ger. fortius and mitius differing widely from ours in composition; not in others.)

**EXTRACTUM SARSÆ LIQUIDUM.** Intense reddish-brown.

Jamaica Sarsaparilla, cut transversely, 16; Distilled Water (temp. 160° F.), 280; Rectified Spirit, 1: macerate in half the water for six hours, and decant the liquor; digest the residue in the remainder of the water for six hours more, express and mix the liquors, filter, and evaporate by a water bath to 7, or until it has a sp. g. 1·130; when cold add the spirit. Sp. g. should be about 1·095. =(2 root in 1).

A fluid oz., which is equal to 16 ozs. decoction, when evaporated produces ½ oz. of solid extract.

*Dose.*—1 to 4 drms.

(U.S. with Glycerine, about 1 in 1; not in others.)

### Not Official.

**Extractum Sarsæ Compositum Liquidum**, Liquid Compound Extract of Sarsaparilla.—Jamaica Sarsaparilla, cut transversely, 16 ozs.; Sassafras, sliced, 2 ozs.; Guaiacum Wood, rasped, 2 ozs.; Liquorice Root, bruised, 2 ozs.; Mezereon, cut, 1 oz.; Rectified Spirit, 1 oz.; Distilled Water, 6 pints: macerate the first five ingredients in one half of the water, at a temperature not exceeding 160° F., for six hours, and decant the liquor; digest the residue in the remainder of the water for the same time, and express; filter the mixed liquors, and evaporate by a water bath to 7 fluid ounces; when cold add the spirit. = (2 in 1).

*Dose.*—1 to 4 drms.

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# SASSAFRAS RADIX.

## SASSAFRAS ROOT.

The dried root of *Sassafras officinale*, from North America.

### *Medicinal Properties.*

Stimulant and diaphoretic. Used as an adjuvant to other medicines, the flavour of which it improves, while it renders them more cordial to the stomach. Used in chronic rheumatism, cutaneous eruptions, scorbutic and syphilitic affections.

The bark of the root, which is stronger, is now an article of commerce.

(Belg. Fr. Ger. and Russ. the Root; U.S. the Root-bark and the pith of the stems; not in others.)

Contained in Decoctum Sarsæ Compositum.

# SCAMMONIUM.

## SCAMMONY.

A Gum Resin obtained by incision from the living root of *Convolvulus Scammonia*, chiefly from Smyrna, in Asia Minor; the juice, collected in shells, is allowed to concrete. The purest is known in commerce as Virgin Scammony.

Solubility: almost entirely dissolved in boiling diluted Rectified Spirit.

*Tests.*—It does not effervesce with Hydrochloric Acid. Boiling Water, agitated with the powder, cooled and filtered, does not strike a blue colour with Tincture of Iodine—indicating absence of Starch. Ether removes from 80 to 90 per cent. of Resin; and what remains is chiefly soluble Gum with a little moisture.

### *Medicinal Properties.*

A powerful drastic cathartic, apt to occasion griping. Usually given with Calomel, and its action is corrected by the Sulphate of Potash. May be used in all cases of torpid bowels, and for removing scybala; also as a vermifuge for children.

*Dose.*—5 to 10 grs. of pure Scammony or of the Resin.

(Belg. Dan. Fr. and U.S.; not in others.)

Contained in Pilula Colocynthidis Composita, Pilula Colocynthidis et Hyoscyami.

### Preparations.

**CONFECTIO SCAMMONII.** Light olive-brown.

Scammony, in fine powder, 3 ozs.; Ginger, in fine powder, 1½ ozs.; Oil of Caraway, 1 drm.; Oil of Cloves, ½ drm.; Syrup, 3 ozs.; Clarified Honey, 1½ ozs.: rub the powders with the Syrup and the Honey into a uniform mass, then add the Oils, and mix. =(1 in 3).

(Not in other Pharmacopœias.)

*Dose.*—10 to 30 grs.

**PULVIS SCAMMONII COMPOSITUS.** Light olive-brown.

Scammony, 4; Jalap, 3; Ginger, 1; all in fine powder: mix. =(1 in 2).

(Fr. gives Brit. formula; not in others.)

*Dose.*—10 to 20 grs.

# SCAMMONIÆ RADIX.

The dried root of *Convolvulus Scammonia*, from Syria and Asia Minor.

### *Medicinal Properties.*

An energetic cathartic. May be used when brisk action is needed, but on account of its griping properties it is rarely used alone. In combination it promotes the action of other medicines, whilst its own harshness is mitigated.

*Is a powerful intestinal, but a feeble hepatic irritant.—Dr. Rutherford.*

(Ger. and Russ.; not in others.)

## SCAMMONIÆ RESINA.

### RESIN OF SCAMMONY.

Made by a patented process, and said to be equal to Virgin Scammony. A formula for its preparation is given in the British Pharmacopœia.

16 ozs. Root produce 1⅛ ozs. Resin.

It is soluble in Ether.—The Author finds that that which is obtained from the makers is not always so.

(Fr. Ger. Russ. and U.S.)

*Dose.*—4 to 8 grs. in powder, or in emulsion with 3 or 4 ozs. of milk.

Contained in Extract. Colocynthidis Composita.

### Preparations.

**MISTURA SCAMMONII.**

Resin of Scammony, 4 grs.; Fresh Milk, 2 ozs.: triturate, and form an emulsion. =(1 in 240).

(Fr. Émulsion purgative avec la Scammonée, 1 in 140; with Resin of Scammony 1 in 280; not in others.)

Virgin Scammony makes the best emulsion.

*Dose.*—The quantity of the formula for an adult, half for a child.

**PILULA SCAMMONII COMPOSITA.**

Resin of Scammony, 1; Resin of Jalap, 1; Curd Soap in powder, 1; Strong Tincture of Ginger, 1; Rectified Spirit, 2: dissolve with a gentle heat, and evaporate to a pill consistence. Product, 3¼.

*Dose.*—5 to 15 grs.

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## SCILLA.

### SQUILL.

The bulb of *Urginea Scilla,* from the Mediterranean coasts, sliced and dried.

*Medicinal Properties.*

A stimulant expectorant and diuretic. It increases the secretion of the bronchial mucous membrane and aids the expectoration of mucus. The tincture largely diluted with water is the best mode of administering it, a teaspoonful mixed with three tablespoonfuls of water, should be at the bedside of a bronchitic patient, and about a teaspoonful taken as often as required to relieve cough and expel tough phlegm, which it does most effectually: should, however, the spasmodic cough continue, despite of this, the following mixture generally quiets it:—

℞ Potassæ Citratis, Ammon. Citratis āā. ʒ iss.; Tinct. Belladonnæ, ʒ iss.; Spir. Chloroformi, ʒ i.; Aquæ ad ℥viij. Two tablespoonfuls for a dose.

As an expectorant, it is used with Ipecacuanha and Ammoniacum; as a diuretic, generally given with Mercury.

*Dose.*—1 to 2 grs. of the powder.

(In all the Pharmacopœias.)

### Preparations.

**ACETUM SCILLÆ.** Pale straw.

Dried Squill, bruised, 2½: diluted Acetic Acid, 20; Proof Spirit, 1½: macerate the Squill in the Acid for seven days, then strain with expression, add the spirit, and filter. =(1 in 8 nearly).

*Dose.*—15 to 40 minims.

(In all the Pharmacopœias.)

**OXYMEL SCILLÆ.** Brown.

Vinegar of Squill, 5; Clarified Honey, 8: mix, and evaporate till the sp. g. is 1·32.

*Dose.*—½ to 1 drm.

(Belg. Vinegar of Squill 3, Sugar 3, Honey 4; Dan. Vinegar of Squill 1, Honey 3; Fr. Vinegar of Squill 1, Honey 4; Austr. Ger. and Russ. Vinegar of Squill 1, Honey 2.)

**PILULA SCILLÆ COMPOSITA.** Brown.

Squill, in fine powder, 1¼; Ginger, in fine powder, 1; Ammoniacum, in powder, 1; Hard Soap, in powder, 1; Treacle, by weight, 2, or a sufficiency: mix the powders, add the Treacle, and beat into a mass. =(1 in 5).

*Dose.*—5 to 10 grs.

(Fr. gives Brit. formula; U.S. about 1 in 9; Belg. 1 in 7; not in others.)

**SYRUPUS SCILLÆ.** Yellow.

Vinegar of Squill, 20; Refined Sugar, 40: dissolve with the aid of heat.

*Dose.*—½ to 1 drm.

(Belg. Vinegar of Squill 35, Sugar 66; U.S. Vinegar of Squill 16, Sugar 24; Russ. about half the strength and without Vinegar; not in others.)

**TINCTURA SCILLÆ.** Straw.

Dried Squill, bruised, 1; Proof Spirit, 8: macerate for forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, let it drain, and pour on the remaining spirit; when it ceases to drop, press, filter, and make up with Proof Spirit to 8. =(1 in 8).

*Dose.*—15 to 30 minims with Paregoric or Tincture of Belladonna for cough.

(Fr. gives Brit. formula; U.S. about 1 in 7½; Belg. Fr. Ger. and Russ. 1 and 5, all by weight; not in Austr. and Dan.)

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## SCOPARII CACUMINA.

### BROOM TOPS.

The fresh and dried tops of *Sarothamnus scoparius*, from indigenous plants.

*Medicinal Properties.*

Diuretic and cathartic. Employed in dropsical complaints.

(U.S.; Fr. Genêt; not in others.)

### Preparations.

**DECOCTUM SCOPARII.**

Broom Tops, dried, 1; Distilled Water, 20: boil ten minutes, and strain. The product should measure 20. =(1 in 20).

*Dose.*—2 to 4 oz.

(Not in other Pharmacopœias.)

**SUCCUS SCOPARII.** Dark brown.

Bruise fresh Broom Tops in a stone mortar, express the juice, and to every 3 measures of juice add 1 of Rectified Spirit; set aside seven days, and filter. Keep it in a cool place.

*Dose.*—1 to 2 drms.

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## SENEGÆ RADIX.

SENEGA ROOT.

The dried root of *Polygala Senega*, from North America.

(In all the Pharmacopœias.)

### *Medicinal Properties.*

A stimulating expectorant and diuretic, and, in large doses, emetic and cathartic. Used in asthenic and chronic bronchitis, and in dysmenorrhœa and albuminuria.

*Dose.*—In powder, 15 to 20 grs.

### Preparations.

**INFUSUM SENEGÆ.**

Senega Root, bruised, 1; boiling Distilled Water, 20: infuse one hour, and strain. =(1 in 20).

*Dose.*—1 to 2 ozs.

(U.S. Decoctum 1 in 15; Fr. Tisane de Polygala, 1 in 100; not in others.)

**TINCTURA SENEGÆ.** Reddish-brown.

Senega Root, bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, and let it drain; pour on the remaining spirit; when the fluid ceases to drop, press, filter, and make up with Proof Spirit to 8. =(1 in 8).

*Dose.*—½ to 2 drms.

(Russ. 1 and 5, by weight; not in the others.)

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### Not Official.

Syrupus, Russ. and U.S.—Percolate 4 ozs. Senega Root with 32 ozs. Proof Spirit, evaporate at 160° F. to 8 ozs., and add 15 ozs. of Sugar.

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## SENNA.

SENNA.

The leaflets of various species of *Cassia*. The British Pharmacopœia recognises two kinds: the Alexandrian Senna (*Senna Alexandrina*), imported from Alexandria, being the leaflets of *C. lanceolata* and *C. obovata* carefully freed from the flowers, pods, and leaf-stalks; and the Tinnivelly Senna (*Senna Indica*), the leaflets of *C. elongata*, from plants cultivated in Southern India. The Alexandrian Senna must be free from admixture of leaves, flowers, and fruit of the Argel (*Solenostemma Argel*). The unequally oblique base and freedom from bitterness distinguish the Senna from Argel leaves; the latter are also thicker, greyer, and more wrinkled.

### *Medicinal Properties.*

A general and efficient laxative in cases of occasional or habitual constipation. Given in large doses, it occasions griping and nausea; it is therefore best administered with aromatics. Used in dyspepsia, and in febrile and inflammatory diseases; but as it is somewhat drastic, it must be avoided when the alimentary canal is much affected.

The different kinds of Senna, freed from stalks, are of nearly equal medicinal value.

*Is an hepatic stimulant of feeble power.—Dr. Rutherford.*

*Dose.*—Of powder, 10 to 30 grs.

(In all the Pharmacopœias.)

## Preparations.

**CONFECTIO SENNÆ.** Almost black.

Senna, in fine powder, 7; Coriander, in fine powder, 3; Figs, 12; Tamarinds, 9; Cassia Pulp, 9; Prunes, 6; Extract of Liquorice, ¾; Refined Sugar, 30; Distilled Water, 24. Boil the Figs and Prunes gently in the water four hours, and add water to make up 24; then add the Tamarinds and Cassia; macerate for two hours, and rub the pulp through a hair sieve; dissolve the Sugar and Liquorice in the pulped product with a gentle heat; and while still warm mix in the Senna and Coriander. The product should be made to weigh 75, either by evaporation, or the addition of more water. The result should, according to Brit. Ph. 1864, weigh 60 = 1 in 8½, according to Brit. Ph. 1867, 75, which will make it 1 in 11 nearly.

*Dose.*—60 to 120 grs.

(In all the Pharmacopœias, but differing in composition.)

**INFUSUM SENNÆ.**

Senna, 1 oz.; Ginger, sliced, 30 grs.; boiling Distilled Water, 10 ozs.: infuse one hour, and strain. =(1 in 10).

*Dose.*—1 to 2 ozs.

(Belg. and Fr. Brit. Ph. formula; Austr. Inf. Laxativum, about 1 in 8, with Manna; Belg., 1 in 10; Dan. Compound, 1 in 10; Ger and Russ. Composita, 1 in 8, with Manna and Rochelle Salt; U.S. with Coriander, about 1 in 15.)

As this Infusion quickly spoils by keeping in warm weather, the addition of 1 gr. of Nitre to each ounce will be found to impart great conservative power. From 20 ozs. of Infusion only 14 ozs. drain out.

**MISTURA SENNÆ COMPOSITA.**

Infusion of Senna, 14; Sulphate of Magnesia, 4; Extract of

Liquorice, ½; Tincture of Senna, 2½; Compound Tincture of Cardamoms, 1½: dissolve with the aid of a gentle heat, then add the Tinctures, and sufficient Infusion of Senna to make 20.
=(1 Sulphate of Magnesia in 5).

*Dose.*—1 to 1½ oz.

**SYRUPUS SENNÆ.** Intense red.

Senna, broken small, 8 ozs.; Oil of Coriander, 1½ minims; Refined Sugar, 12 ozs.; Distilled Water, 50 ozs., or a sufficiency; Rectified Spirit, 1 oz.: digest the Senna in three-fourths of the water twenty-four hours at a temperature of 120° F., press, and strain; digest the marc in the remainder of the water six hours, press, and strain; evaporate the mixed liquors to 5 ozs.; when cold, add the Rectified Spirit, containing the Oil of Coriander. Filter, and wash the filter with water to make up 8 ozs.; add the Sugar, and dissolve with a gentle heat. Should weigh 21 ozs., and measure 16 ozs. Sp. g. 1·310. =(1 in 2).

*Dose.*—1 to 2 drms. Brit. Ph. dose, 1 to 4 drms.; for children, ½ to 1 drm.

(Belg. Dan. Ger. and Russ. with Fennel and Manna; Austr. with Aniseed and Manna; not in others.)

An excellent purgative, and pleasant to take; it does not gripe in moderate doses.

**TINCTURA SENNÆ.** Black.

Senna, broken small, 5; Raisins, freed from seeds, 2; Caraway Fruit, bruised, 1; Coriander Fruit, bruised, 1; Proof Spirit, 40: macerate the ingredients forty-eight hours in three-fourths of the spirit, agitating occasionally; pack in a percolator, and when it ceases to drop, pour on the remaining spirit; press, filter, and make up with Proof Spirit to 40. =(1 in 8).

*Dose.*—2 to 8 drms.

(Fr. gives Brit. formula; Belg. and Fr. 1 in 5, by weight; not in others.)

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# SERPENTARIÆ RADIX.

## SERPENTARY ROOT.

The dried rhizome of *Aristolochia Serpentaria*, from the southern parts of North America.

### *Medicinal Properties.*

Stimulant, tonic, and diaphoretic. A valuable remedy in the low stage of typhus, combined with Carbonate of Ammonia, given when the tongue is dry and brown or black, and the pulse low. Used in dyspepsia and chronic rheumatism.

*Dose.*—Of the powder, 10 to 15 grs.

(In all the Pharmacopœias.)

### Preparations.

**INFUSUM SERPENTARIÆ.**

Serpentary Root, bruised, 1; boiling Distilled Water, 40; infuse two hours and strain. =(1 in 40).

*Dose.*—1 to 2 ozs.

(U.S. about 1 in 30; not in others.)

**TINCTURA SERPENTARIÆ.** Reddish-brown.

Serpentary Root, bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, and let it drain; pour on the remaining spirit, and when it ceases to drop, press, filter, and make up with Proof Spirit to 8. =(1 in 8).

*Dose.*—½ to 2 drms.

(U.S. 1 in 7; Belg. 1 in 5; both by weight; not in others.)

# SEVUM PRÆPARATUM.

## PREPARED SUET.

The internal fat of the abdomen of the sheep, purified by melting and straining.

Soluble in boiling Alcohol; a portion of it separates on cooling.

Contained in Emplastrum Cantharidis, Unguentum Hydrargyri.

(In all the Pharmacopœias; Fr. Suif de Mouton; Austr. Sebum ovile.)

Not Official.

# SIMARUBA.

## BITTER SIMARUBA, OR MOUNTAIN DAMSON.

The root bark of *Simaruba officinalis*, from the West Indies.

*Medicinal Properties.*—A bitter tonic. In large doses causes nausea; is diaphoretic and diuretic. Principally used in the asthenic and chronic form of dysentery; may be combined with Opium in epidemic dysentery, and in the advanced stages of diarrhœa.

*Dose.*—15 to 30 grs.

Infusum.—Simaruba, bruised, 3 drms.; boiling Water, 1 pint: infuse two hours, and strain. =(1 in 53).

(Fr. Tisane, 1 in 200; not in others.)

*Dose.*—1 to 2 ozs.

This infusion does not tinge the preparations of Iron.

Simaba Cedron Seeds possess this bitter in an eminent degree, and well deserve a therapeutic trial. Dose of the powder, 1 to 3 grs.

# SINAPIS.

## MUSTARD.

The seeds of *Sinapis nigra* and *S. alba* reduced to powder, mixed.

*Test.*—A decoction cooled is not made blue by Tincture of Iodine—indicating absence of Starch.

### *Medicinal Properties.*

Powerfully stimulant; swallowed whole as a laxative. The powder as an emetic, or as a rubefacient.

(In all the Pharmacopœias.)

## Preparations.

**CATAPLASMA SINAPIS.**

Mustard, in powder, 2½; Linseed Meal, 2½; boiling Water, 10: mix the Linseed Meal with the water, and add the Mustard, constantly stirring.

Used as a counter-irritant in inflammation, neuralgic pains; also in spasms.

(Dan. Unguentum Sinapinum, and Fr. Cataplasme Rubifiant, with Mustard only; not in others.)

**CHARTA SINAPIS.**

| | |
|---|---|
| Black Mustard seeds, in powder . . . | 1 oz. |
| Solution of Gutta-percha . . . . . | 2 ozs., or a sufficiency. |

Mix the mustard with the gutta-percha solution so as to form a semi-fluid mixture, and having poured this into a shallow flat-bottomed vessel, such as a dinner-plate, pass strips of cartridge-paper over its surface so that one side of the paper shall receive a thin coating of the mixture. Then lay the paper on a table with the coated side upwards, and let it remain exposed to the air until the coating has hardened.

Before being applied to the skin, let the mustard paper be immersed for a few seconds in tepid water.

The United States formula, from which this was taken, was published in the ninth edition of the "Companion," and is now repeated in the Not Officials because it is more definite than the above.

**LINIMENTUM SINAPIS COMPOSITUM.** Intense green.

Oil of Mustard, 1 drm.; Ethereal Extract of Mezereon, 40 grs.; Camphor, 120 grs.; Castor Oil, 5 drms.; Rectified Spirit, 32 drms.: dissolve. =(1 in 40).

A stimulating liniment.

(Spiritus Sinapis, Austr. and Ger., Oil 1, Spirit 50; Belg. and Russ., Oil 1, Spirit 24; all by weight.)

**OLEUM SINAPIS.** Yellow, having a pungent odour.

The Oil distilled with water from the seeds of Black Mustard, *Sinapis Nigra*, after the expression of the fixed oil. Sp. g. 1·015.

Solubility, 1 in 50 of water; readily in Rectified Spirit and Ether. Applied to the skin, it produces almost instant vesication.

(Austr. and Belg. Oleum Sinapis Æthereum; Dan. Ætheroleum Sinapis; Ger. and Russ. Oleum Sinapis; not in others.)

### Not Official.

INFUSION (2 drms. of Mustard to 4 ozs. boiling Water) cures hiccough.

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CHARTA SINAPIS. U.S.

Black Mustard, in powder, 90 grs. Solution of Gutta Percha as much as will give it a semi-liquid consistence, and let it be spread with a suitable brush on one side of a stiff piece of paper 4 inches square, and allow it to dry.

Before applying it to the skin it should be dipped in warm water for 15 seconds.

The Solution of Gutta Percha is made thus:—Steep thin Gutta Percha, 1¼ oz. in 12 ozs. by weight of Chloroform until dissolved; mix 2 oz. Carbonate of Lead in fine powder with 5 ozs. by weight of Chloroform, add this to the solution and shake frequently, and let it stand for 10 days, or until the insoluble matter subsides, then pour off the clear liquid for use.

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Not Official.

## SODIUM.

SODIUM.

**Na**, eq. 23.

Sp. g. 0·97. The metal of the alkali Soda, discovered by Sir Humphrey Davy in 1807, is a soft, malleable, sectile solid, of a silver-white colour, possessing a high degree of metallic lustre, which quickly tarnishes on exposure to the air. Like Potassium, it has a strong affinity for Oxygen: when thrown on cold water, it instantly fuses to a globule, without combustion, and traverses the surface in all directions; on hot water, however, combustion of the Hydrogen ensues.

There are no direct official preparations of Sodium. The Chloride of Sodium is obtained by dissolving Rock Salt in water, and recrystallizing it; some, however, absolutely pure and perfectly white, is found imbedded in the common brown Rock Salt.

From the Chloride of Sodium the Carbonate of Soda is now prepared, from the latter of which all the other preparations are made.

The following are the preparations of Soda given in the British Pharmacopœia:—

| | | |
|---|---|---|
| SODA CAUSTICA | | |
| SODA TARTARATA | Dose, | 1 to 4 drms. |
| SODÆ ACETAS. | | |
| SODÆ ARSENIAS | ,, | 1/16 to 1/8 gr. |
| SODÆ ARSENIATIS LIQUOR | ,, | 5 to 10 minims. |
| SODÆ BIBORAS. *See* BORAX. | | |
| SODÆ BICARBONAS | ,, | 10 to 30 grs. |
| SODÆ CARBONAS. | | |
| SODÆ CARBONAS EXSICCATA | ,, | 3 to 10 grs. |
| SODÆ CHLORATÆ LIQUOR | ,, | 10 to 20 minims. |
| SODÆ CITRO-TARTRAS EFFERVESCENS | ,, | 1 to 2 drms. |
| SODÆ EFFERVESCENS LIQUOR | ,, | 4 to 8 ozs. |
| SODÆ HYPOPHOSPHIS | ,, | 5 to 10 grs. |
| SODÆ LIQUOR. *See* SODA CAUSTICA | ,, | ½ to 1 drm. |
| SODÆ NITRAS. | | |
| SODÆ PHOSPHAS | ,, | ¼ to 1 oz. |
| *SODÆ* SULPHAS | ,, | ½ to 1 oz. |

SODÆ VALERIANAS . . . . . . . . . . Dose 1 to 5 grs.
SODII CHLORIDUM . . . . . . . . . . „ 10 to 60 grs.

**Preparations of Soda not official are to be found in the Index.**

## SODA CAUSTICA.

### CAUSTIC SODA.

Hydrate of Soda, NaHO, eq. 40, with some impurities.

In hard, greyish-white fragments, very alkaline and corrosive.

Procured by boiling down solution of Soda rapidly in a silver or clean iron vessel until there remains a fluid of oily consistence, a drop of which, when removed on a warmed glass rod, solidifies on cooling. Pour the fluid on a clean silver or iron plate, or into moulds, and as soon as it has solidified break it in pieces.

Solubility, 1 in 1 of water.

*Test.*—40 grains dissolved in water leave scarcely any sediment, and require for neutralization about 900 grain-measures of the volumetric solution of Oxalic Acid.

(U.S.; not in the other Pharmacopœias.)

### Preparation.

**LIQUOR SODÆ.** Colourless.

Carbonate of Soda, 7; Slaked Lime, 3; Distilled Water, 40: dissolve the carbonate in the water, boil in a clean iron vessel, gradually mixing the lime, and stirring constantly for ten minutes; allow the insoluble matter to subside and decant into a green glass bottle, with air-tight stopper.

*Tests.*—Sp. g. 1·047. 1 fluid ounce (458 grains by weight) requires for neutralization 470 grain-measures of the volumetric solution of Oxalic Acid. It does not effervesce when added to an excess of diluted Hydrochloric Acid, nor give any precipitate with Lime or Oxalate of Ammonia—indicating absence of Carbonic Acid and Lime. When it is heated with an excess of diluted Nitric Acid, and evaporated to dryness, the residue forms with water a clear solution, which is rendered only slightly turbid by Chloride of Barium and by Nitrate of Silver, and not at all by Ammonia—indicating absence of Magnesia.

100 grs. contain 4 grains Hydrate of Soda = 18·8 grs. to 1 oz. of Solution.

### *Medicinal Properties.*

Antacid, used in preference to Potash in some diseases of the stomach.

*Dose.*—½ to 1 drm.

(Belg. Soda Caustica Soluta, sp. g. 1·330 to 1·334; Fr. Soude Caustique Liquide, sp. g. 1·330; Dan. Solut. Hydratis Natrici, sp. g. 1·215—1·219, containing 20 per cent.; Ger. Liquor Natri Caustici, sp. g. 1·330 to 1·334, containing 30 to 31 per cent. of Hydrate of Soda; Russ. Natrum Causticum Solutum, sp. g. 1·330; U.S. Liquor Sodæ, sp. g. 1·071, containing 5·7 per cent of Hydrate of Soda.)

**ANTIDOTES.**—Same as Liquor Potassæ, p. 250.

## SODA TARTARATA.

### TARTARATED SODA.

*Syn.* Tartrate of Soda and Potash. Rochelle Salt.

$NaKC_4H_4O_6 . 4H_2O$, eq. 282.

In colourless transparent prisms, or halves of prisms of the right-rhombic order, generally eight-sided; tasting like common salt.

Solubility, 1 in 1¼ of water; insoluble in Rectified Spirit.

*Test.*—Entirely soluble in cold water. 141 grains, heated to redness till gases cease to be evolved, leave an alkaline residue (carbonates), which requires for neutralization 1000 grain-measures of the volumetric solution of Oxalic Acid.

*Medicinal Properties.*

A mild, cooling purgative, well suited to delicate and irritable stomachs. It is not aperient in small doses, its action being to render the urine alkaline.

*A feeble hepatic, but a powerful intestinal stimulant.—Dr. Rutherford.*

*Dose.*—2 to 4 drms.

(Austr. Kalium Natro-tartaricum; Belg. Tartras Potassæ et Sodæ; Dan. Tartras Natrico-Kalicus; Fr. Tartrate de Potasse et de Soude; Ger. Tartarus Natronatus; Russ. Natro-Kali Tartaricum (Sal Polychrestum Seignetti); U.S. Potassii et Sodii Tartras.)

**Not Official.**

Seidlitz Powder.—Rochelle Salt, 2 drms.; Bicarbonate of Soda, 40 grs.: mix. In a separate powder, 37 grains of Tartaric Acid.

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## SODÆ ACETAS.

### ACETATE OF SODA.

$NaC_2H_3O_2 . 3H_2O$, eq. 136. Colourless.

Used in the preparation of Ferri Arsenias, Ferri Phosphas, Syrupus Ferri Phosphatis.

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## SODÆ ARSENIAS.

### ARSENIATE OF SODA.

$Na_2HAsO_4 . 7H_2O$, eq. 312.

In colourless transparent prisms.

Solubility, 1 in 2 of water.

*Tests.*—Heated to 300°, it loses 40·38 per cent. of its weight. A watery solution of 10 grains of the residue, heated with 53 grain-measures of the volumetric solution of Soda, continues to give a precipitate with the volumetric solution of Nitrate of Silver until 1613 grain-measures of the latter have been added. This precipitate is

Arseniate of Silver, and proves that the proper quantity of Arsenic Acid is present.

6·6 grs. of the crystals yield 4 grains of Anhydrous Salt.

*Dose.*—$\frac{1}{16}$ to $\frac{1}{8}$ grain.

(Belg. dried Salt; Fr. and U.S. crystallized: not in others.)

### *Medicinal Properties.*

Similar to those of the Arsenite of Potash, or Fowler's Solution. Used in skin and nervous diseases. It cures eczema more speedily than Liquor Arsenicalis, producing less gastric disturbance and less irritability of the conjunctiva.

### Preparation.

**LIQUOR SODÆ ARSENIATIS.** Colourless.

Arseniate of Soda (rendered anhydrous by a heat not exceeding 300° F.), 4 grs.; Distilled Water, 1 oz.: dissolve.
=(1 grain in 120 minims).

Differs in strength from Pearson's Solution.

It is of about half the strength of Liquor Arsenicalis.

*Dose.*—5 to 10 minims, carefully increased.

(U.S. same as Brit.; Belg. and Fr. crystallized Arseniate of Soda 1 in 600. Pearson's Solution; dose 5 to 10 minims. Fr. has also the Brit. Ph. formula.)

ANTIDOTES. *See* ACIDUM ARSENIOSUM, page 5.

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Not Official.

## SODÆ BENZOAS.

Used with good effect in all febrile diseases of an infectious character, and is said to be certain and permanent, leaving no unpleasant or after effects from long use, and 380 grains daily were given.

The usual dose is 150 to 230 grs. in Vesical Catarrh and Tuberculosis.

It is also employed as a prophylactic.

*Is a powerful hepatic stimulant; it is not an intestinal stimulant.—Dr. Rutherford.*

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## SODÆ BICARBONAS.

BICARBONATE OF SODA.

*Syn.* SODÆ SESQUICARBONAS, Ph. L., 1836.

$NaHCO_3$, eq. 84.

A white powder, or small opaque irregular scales, of a saline not unpleasant taste.

Solubility, 1 in 10 of water.

*Tests.*—When supersaturated with Nitric Acid, its solution scarcely precipitates with Chloride of Barium or Nitrate of Silver—indicating a mere trace of sulphate and chloride. 84 grains, exposed to a red heat, leave 53 grains of alkaline residue (carbonate), which requires for neutralization 1000 grain-measures of the volumetric solution of Oxalic Acid.

*Medicinal Properties.*

Analogous to those of the Bicarbonate of Potash; it is less caustic and irritating than Carbonate of Soda. Employed as an antacid in dyspepsia. Useful in calculus with excess of Uric Acid; the Bicarbonate of Potash, however, is preferable, as it forms soluble salts with Uric Acid. It is a resolvent or alterative in some forms of inflammations, glandular affection, syphilis, and scrofula, and a diuretic in dropsy. Moistened with water, is an excellent application to the sting of wasps and gnats.

*Has scarcely any appreciable effect as a stimulant of the liver, even when given in large doses.—Dr. Rutherford.*

*Dose.*—10 to 30 grs.

(In all the Pharmacopœias; Dan. Bicarbonas Natricus; Fr. Bicarbonate de Soude; Austr. Ger. and Russ. Natrum Bicarbonicum; Belg. Bicarbonas Sodæ.)

## Preparation.

**TROCHISCI SODÆ BICARBONATIS.** White.

Bicarbonate of Soda, in powder, 3600 grs.; Refined Sugar, 25 ozs.; Gum Acacia, in powder, 1 oz.; Mucilage of Gum Acacia, 2 ozs.; Distilled Water, 1 oz.: mix, and form into 720 lozenges.

Each lozenge contains 5 grains of Bicarbonate of Soda.

*Dose.*—1 to 6 lozenges.

### Not Official.

PULVIS SALINUS ANTICHOLERICUS (Dr. Stevens).—Bicarbonate of Soda, 30 grs. Chloride of Sodium, 20 grs.; Chlorate of Potash, 7 grs.: for one dose.

Given frequently in a small tumbler of cold water, to arrest the pain and purging.

PESSARY (Antacid).—Bicarbonate of Soda, 15 grs.; Oil of Theobroma sufficient for one pessary.

Brockedon's compressed pellets, taken for heartburn.

Bicarbonate of Soda and Tartaric Acid when well dried do not act on each other, if well corked will remain good for years. Fifty years ago they were flavoured with Essence of Lemon and sold as Lemon and Kali, they are now sold under various names (without lemon), and are much used in India as a cooling and refreshing medicine.

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## LIQUOR SODÆ EFFERVESCENS.

*Syn.* SODA WATER. Colourless.

Bicarbonate of Soda, 30 grs.; Water, 20 ozs.: dissolve and filter, and pass into it as much washed Carbonic Acid Gas (obtained by the action of Sulphuric Acid on Chalk) as can be introduced by the pressure of seven atmospheres; bottle, and secure the corks with wire.

Each half-pint bottle contains 15 grains.

*Tests.*—Ten fluid ounces, after being boiled for five minutes, require for neutralization 178 grain-measures of the volumetric solution of Oxalic Acid.

## SODÆ CARBONAS.

### CARBONATE OF SODA.

$Na_2CO_3 . 10H_2O$, eq. 286.

In transparent, colourless, laminar crystals of a rhombic shape, containing 63 per cent. of water of crystallization, which can be discharged by heat; efflorescent, with a harsh alkaline taste, and strong alkaline reaction.

Solubility, 1 in 2 of Water; insoluble in Rectified Spirit.

*Tests.*—When supersaturated with Nitric Acid it precipitates only slightly or not at all with Chloride of Barium or Nitrate of Silver—indicating merely a trace of Sulphate and Chloride. 143 grains require for neutralization at least 960 grain-measures of the volumetric solution of Oxalic Acid.

*Medicinal Properties.*

Antacid, antilithic, and resolvent. Given principally in diseases attended with acidity of the stomach, as gout and dyspepsia.

*Dose.*—10 to 30 grs. in bitter infusion.

(In all the Pharmacopœias.)

### Preparation.

**SODÆ CARBONAS EXSICCATA.** $Na_2 CO_3$, eq. 106. White.

Expose the Carbonate of Soda in a porcelain capsule to a rather strong sand-heat until the liquid first formed becomes a dry cake. Reduce to powder.

53 grains are equal to 143 grains of crystallized salt.

*Dose.*—3 to 10 grains three times daily in pill, with soap and aromatics.

(In all the Pharmacopœias except Fr.)

**Balneum Alkalinum.**—Crystals of Carbonate of Soda, 8 or 10 ozs. to 60 gallons of Water.

Used in skin diseases as a more effective means of cleansing than by soap.

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## SODÆ CHLORATÆ LIQUOR.

### SOLUTION OF CHLORINATED SODA.

A mixed solution of Hypochlorite of Soda, Chloride of Sodium, and Bicarbonate of Soda. Colourless.

Carbonate of Soda, 12; Black Oxide of Manganese, in powder, 4; Hydrochloric Acid, 15; Distilled Water, 40: dissolve the powdered Carbonate of Soda in 36 parts of the water in a glass vessel. Mix the Oxide of Manganese and Hydrochloric Acid, and place them in a retort, or glass flask with a bent tube attached by means of a cork to its mouth. Heat the mixture gradually, and pass the evolved Chlorine through a wash-bottle containing 4 of the water, and afterwards into the solution of Carbonate of Soda. When the disengagement of

Chlorine has ceased, transfer the solution to a stoppered bottle, and keep it in a cool and dark place.

*Tests.*—Sp. g. 1·103. 1 drachm (70 grains by weight) added to a solution of 20 grains of Iodide of Potassium in 4 ounces of water, and acidulated with 2 drachms of Hydrochloric Acid, requires for the discharge of the brown colour which the mixture assumes, 500 grain-measures of the volumetric solution of Hyposulphite of Soda. It is not precipitated by Oxalate of Ammonia—indicating absence of Lime.

Test explained under Calx Chlorata, p. 77.

### *Medicinal Properties.*

Stimulant, antiseptic, and resolvent. Used internally in typhus, scarlatina, etc., indicated by great prostration of strength, fœtid evacuations, dry and furred tongue; in dysentery, dyspepsia, and in glandular enlargements, and chronic mucous discharges. Locally, in all affections attended with fœtor, and may be applied, diluted, as a wash, poultice, or by lint; 4 to 6 drms. in 12 ozs. of water for a gargle. An excellent application to sore nipples. It is also a powerful disinfecting agent, used in preference to Chloride of Lime, because, when the Chlorine has escaped, the lime is left in a caustic condition, and acts corrosively on carpets, etc.

*Dose.*—10 to 20 minims.

(U.S. Belg. Fr. (Hypochlorite de Soude liquide), having 12 Chlorinated Lime, 24 Carbonate of Soda, but a variable quantity of Water; Ger. Liquor Natri Chlorati; Russ. Natrum Hypochlorosum Solutum; not in others.)

### Preparation.

**CATAPLASMA SODÆ CHLORATÆ.**

Solution of Chlorinated Soda, 1; Linseed Meal, 2; boiling Water, 4: add the Linseed Meal gradually to the water, stirring constantly, then mix the solution of Chlorinated Soda.

(Not in other Pharmacopœias.)

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## SODÆ CITRO-TARTRAS EFFERVESCENS.

### EFFERVESCENT CITRO-TARTRATE OF SODA.

Bicarbonate of Soda, in powder, 17; Tartaric Acid, in powder, 8; Citric Acid, in powder, 6: mix the powders thoroughly, place them in a dish or pan of a suitable form heated to between 200° and 220° F., and when the particles of the powder begin to aggregate, turn them assiduously until they assume a granular form, then by means of a suitable sieve separate the granules of uniform and most convenient size, and preserve them in well-stoppered bottles. White, and in grains.

*Dose.*—60 to 120 grs.

## SODÆ HYPOPHOSPHIS.

### HYPOPHOSPHITE OF SODA.

### $NaPH_2O_2$, eq. 88.

Obtained by adding carbonate of soda to solution of hypophosphite of lime so long as a precipitate of carbonate of lime is formed, then filtering the solution and evaporating it to dryness by the heat of a steam-bath, keeping it constantly stirred when the salt begins to solidify.

Solubility, 1 in 1 of Water; 1 in 2 of Glycerine; in Spirit, sparingly.

*Characters and Tests.*—A white granular deliquescent salt, having a bitter nauseous taste. At a red heat it ignites, emitting spontaneously inflammable phosphuretted hydrogen.

*Dose.*—5 to 10 grains as a nervine tonic.

(U.S. Russ. Natrum Hypophosphorosum.)

Sodæ Hypophosphitis Solutio.—Swan's Solution is 3 grs. to the drachm.

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## SODÆ NITRAS.

### NITRATE OF SODA.

### $NaNO_3$, eq. 85.

A native salt, purified by crystallization from water. Colourless.

Used only to prepare Sodæ Arsenias.

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## SODÆ ET POTASSÆ TARTRAS. *See* Soda Tartarata, p. 290.

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## SODÆ PHOSPHAS.

### PHOSPHATE OF SODA.

### $Na_2HPO_4 . 12H_2O$, eq. 358.

In transparent, colourless, rhombic prisms, terminating by four converging planes, efflorescent, tasting like common salt.

Solubility, 1 in 5 of water.

*Test.*—Heated to dull redness it loses 63 per cent. of its weight, leaving a residue, which, when dissolved in water, gives, with Chloride of Barium, a precipitate almost entirely soluble in diluted Nitric Acid.

### *Medicinal Properties.*

A mild purgative; from its pure saline taste it is called tasteless

Aperient Salt; it is well suited to children and persons of delicate stomach. Diuretic in small doses.

*Dose.*—½ to 1 oz.

(Belg. Phosphas Sodæ; Dan. Phosphas Natricus; Fr. Phosphate de Soude; Austr. Ger. and Russ. Natrum Phosphoricum; U.S.)

Best given in gruel or weak broth.

Not Official.

## SODÆ SALICYLATUM.

Solubility, 1 in 1 of Water; 1 in 4½ of Rectified Spirit.

Given in Rheumatism, *Lancet* and *Medical Times*, May 29, 1880; in Diabetes, *Lancet*, April 17, 1880.

*Dose.*—10 to 20 grs. twice or thrice a day.

That made from the natural acid is preferred.

*It is a very powerful stimulant of the liver, but a very slight stimulant of the intestinal glands.—Dr. Rutherford.*

(Russ.; not in others.)

## SODÆ SULPHAS.

### SULPHATE OF SODA.

*Syn.* GLAUBER SALT.

$Na_2SO_4\,10H_2O$, eq. 322.

In colourless transparent oblique rhombic prisms, has a cool saline and bitter taste, effloresces on exposure to air; imparts a yellow colour to flame.

Solubility, 1 in 3 of water, and measures 3½.

*Test.*—100 grains dissolved in Distilled Water acidulated with Hydrochloric Acid give, with Solution of Chloride of Barium, a white precipitate, which, when washed and dried, weighs 72·2 grains.

(In all the Pharmacopœias; Dan. Sulphas Natricus; Ger. Natrum Sulphuricum.)

### *Medicinal Properties.*

An excellent cooling aperient.

*A moderately powerful stimulant of the liver, and a powerful stimulant of the intestine.—Dr. Rutherford.*

*Dose.*—½ to 1 oz.

100 Sulphate of Soda exposed to heat in a crucible lose 55·9 of water.

Not Official.

SODÆ SULPHIS.—Prepared by saturating a solution of Carbonate of Soda with pure Sulphurous Acid gas.

It crystallizes in white transparent prisms, which effloresce when exposed to the air.

Solubility, 1 in 4 of water.

Given with success for sarcina ventriculi.

*Dose.*—10 to 60 grs.

**Sodæ Hyposulphis.**—Prepared by digesting a solution of Sulphite of Soda with Sulphur, or by passing Sulphurous Acid gas through a solution of Sulphide of Sodium.

It crystallizes in prisms, which have a bitter saline taste, inodorous.

Solubility, in water freely, but not in alcohol.

It is given for sarcina ventriculi, also in scrofulous, syphilitic, and rheumatic affections, sometimes used as a lotion for parasitic skin diseases (1 oz. to a gallon of water).

*Dose.*—10 to 60 grs.

5 lbs. of the salt dissolved in 100 gallons of water was recommended for the ordinary drink for cattle as a preventive to Cattle Plague.

**Depilatory.**—Sulphuret of Sodium, 3; Quick Lime, in powder, 10; Starch, 10; mix.

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## SODÆ VALERIANAS.

### VALERIANATE OF SODA.

$NaC_5H_9O_2$, eq. 124.

In dry white masses without alkaline reaction.

Solubility: entirely in Alcohol.

*Dose.*—1 to 5 grs.

Used chiefly to prepare Valerianate of Zinc.

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Not Official.

## SODII BROMIDUM.

Solubility, 1 in 1¼ of Water; 1 in 16 of Rectified Spirit.

*Dose.*—2 to 6 grs.

It has been recommended as a remedy for sea sickness in 60 grain doses three times a day for at least two days before embarkation on a long voyage.—*B. M. Jl.* Oct. 24, 1881, p. 730.

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## SODII CHLORIDUM.

### CHLORIDE OF SODIUM. COMMON SALT.

NaCl, eq, 58·5.

In small, white, crystalline grains, or transparent cubic crystals.

Solubility of pure Rock Salt, 1 in 2¾ of water.

*Test.*—Free from moisture.

The solution of Pure Rock Salt is not rendered hazy by Chloride of Barium nor by Phosphate of Soda after the addition of a mixed solution of Ammonia and Chloride of Ammonium. The addition of Solution of Ammonia and Chloride of Ammonium is to produce with Magnesia, if it be present, Ammonio-phosphate of Magnesia.

*Medicinal Properties.*

In small doses, stimulant, tonic, and anthelmintic; in larger doses, purgative and emetic. It is also antiperiodic in doses of 8 or 12 drachms during the intervals. Locally, as a fomentation to sprains and bruises. As a salt water bath (1 pound to 4 gallons), a tonic and excitant of the system, especially in children. A saturated solution forced up the nostrils with a syringe is most effective in removing the fœtid odour from diseased frontal sinuses. A recent cold is greatly relieved by washing the nostrils and gargling the throat with a weak solution of Salt. In case of a leech being swallowed drink a strong solution of Salt.

Its value as a condiment is well known; animals as well as ourselves require it. Soldiers are supplied with it; our army ·5 (=½ oz.) daily; the French, ·5; Prussian, ·87; Russian, 1·86; but for a long time the Russian army had salt-money given, and it was only when scurvy attacked them that the money was stopped and the salt given.

The American travellers carry a bag of salt and a knife, and when bitten by snakes, the wound is scraped, salt applied, and the traveller proceeds.

Its antiseptic properties are proverbial; it is used as a dentifrice on that account. Given with Carbonate of Soda and Chlorate of Potash by Dr. Stevens in all stages of Cholera, and is also effectual in common Diarrhœa, p. 292.

*A very feeble hepatic stimulant.—Dr. Rutherford.*

*Dose.*—10 to 60 grs. as a tonic: 120 to 240 grs. as a cathartic.

(Belg. Fr. Russ. and U.S.; not in Austr. Dan. and Ger.)

**Not Official.**

## SODII IODIDUM.

**Given in the same doses and for similar purposes as the Iodide of Potassium.**

# SPIRITUS.

## SPIRIT.

All substances which have undergone the vinous fermentation, and in which it is not completely over, contain Alcohol ready formed, which is separated by distillation. The various kinds are distinguished by varieties of flavour and colour. The redistillation of these produces Rectified Spirit.

When spirit is distilled with aromatic vegetables containing volatile oil, the oil rises for the most part with the spirituous vapour, and condenses along with it in a state of solution.

The Spirits of the British Pharmacopœia are as follows: the formulas will be found under the names of the drugs from which they are prepared:—

| Dose. | | Proportion of active ingredient to the whole. |
|---|---|---|
| 30 mins. . | SPIRITUS ÆTHERIS . . . . . . . . | 1 in 3. |
| ½ drm. . | SPIRITUS ÆTHERIS NITROSI. | |
| 20 mins. . | SPIRITUS AMMONIÆ AROMATICUS. | |

| Dose. | | | Proportion of active ingredient to the whole. |
|---|---|---|---|
| ½ drm. | SPIRITUS AMMONIÆ FŒTIDUS. | | |
| 1 drm. | SPIRITUS ARMORACIÆ COMP | | 1 in 8. |
| 30 mins. | SPIRITUS CAJUPUTI | (Oil) | 1 in 50. |
| 10 mins. | SPIRITUS CAMPHORÆ | | 1 in 10. |
| 10 mins. | SPIRITUS CHLOROFORMI | | 1 in 20. |
| 30 mins. | SPIRITUS JUNIPERI | (Oil) | 1 in 50. |
| 30 mins. | SPIRITUS LAVANDULÆ | ,, | 1 in 50. |
| 30 mins. | SPIRITUS MENTHÆ PIPERITÆ | ,, | 1 in 50. |
| 30 mins. | SPIRITUS MYRISTICÆ | ,, | 1 in 50. |
| | SPIRITUS RECTIFICATUS (16 per cent. of water). Sp. g. ·838. | | |
| 12 mins. | SPIRITUS ROSMARINI | (Oil) | 1 in 50. |
| | SPIRITUS TENUIOR (Rect. Sp. 5, Water 3). Sp. g. ·920. | | |
| | SPIRITUS VINI GALLICI (containing 48 to 50 per cent. of Alcohol). | | |

Alcohol is placed in the Appendix, and Alcohol Amylicum will be found in the Index.

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## SPIRITUS ÆTHERIS NITROSI.

### SPIRIT OF NITROUS ÆTHER.

*Syn.* Spiritus Ætheris Nitrici, *Lond. Edin.*

A spirituous solution containing Nitrous Ether, $C_2H_5NO_2$, eq. 75.

Nitric Acid, 3; Sulphuric Acid, 2; Copper, in fine wire (No. 25), 2; Rectified Spirit, a sufficiency: to 20 of the spirit add gradually the Sulphuric Acid, stirring them together; then add to this, also gradually, 2½ of the Nitric Acid. Put the mixture into a retort or other suitable apparatus, into which the copper wire has been introduced, and to which a thermometer is fitted. Attach now an efficient condenser, and applying a gentle heat, let the spirit distil at a temperature commencing at 170° F. and rising to 175° F., but not exceeding 180° F., until 12 have passed over and been collected in a bottle kept cool, if necessary, with ice-cold water; then withdraw the heat, and having allowed the contents of the retort to cool, introduce the remaining ½ of Nitric Acid, and resume the distillation as before, until the distilled product has been increased to 15. Mix this with 40 of the Rectified Spirit, or as much as will make the product correspond to the tests of specific gravity and percentage of Ether separated by Chloride of Calcium. Preserve it in well-closed vessels.

*Characters and Tests.*—Transparent and nearly colourless, with a very slight tinge of yellow, mobile, inflammable, of a peculiar penetrating apple-like odour, and sweetish, cooling, sharp taste. It effervesces feebly or not at all when shaken with a little Bicarbonate of Soda. When agitated with solution of Sulphate of Iron and a few drops of Sulphuric Acid, it becomes deep olive-brown or black. If it be agitated with twice its volume of saturated solution of Chloride of Calcium in a closed tube, two per cent. of its original volume will separate in the form of an Ethereal liquid, and rise to the surface of the mixture.

Sp. g. 0·845.

*Medicinal Properties.*

Stimulant, diaphoretic, and diuretic. Useful in dropsy and catarrh.

*Dose.*—½ to 2 fluid drms.

(Fr. Esprit de Nitre Dulcifié, a mixture of Nitric Acid 1, Alcohol 3, both by weight; Belg. Æther Nitricus Alcoholicus, sp. g. ·850—·860; Dan. sp. g. ·838 to ·842; Ger. sp. g. ·840—·850; Russ. sp. g. ·840 to ·850; U.S. sp. g. ·837.)

INCOMPATIBLES.—Iodide of Potassium, Sulphate of Iron, Tincture of Guaiacum, Gallic and Tannic Acids. Emulsions are curdled by its addition.

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Not Official.

## SPIRITUS FRUMENTI. U.S.Ph.

WHISKY.

Spirit obtained from fermented grain by distillation, and containing from 48 to 56 per cent. by volume of Alcohol. It should be free from disagreeable odour and not less than 2 years old.

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## SPIRITUS RECTIFICATUS.

RECTIFIED SPIRIT.

Alcohol, $C_2H_6O$, eq. 46, with 16 per cent. of water; obtained by the distillation of fermented saccharine fluids, and by the rectification of the product, if it be not of proper density.

Rectified Spirit dissolves Ammonia, Camphor, Balsams, Castor Oil, Iodine, Lithia, Mannite, Phosphorus, Potash (but not the Carbonate), Soda, Sulphur, Sugar, Tannic and Gallic Acids, and deliquescent salts.

When 18 measures of Rectified Spirit are mixed with 18 of water, the mixture condenses into 34 measures.

*Test.*—Sp. g. 0·838. Burns with a blue flame without smoke. Remains clear when diluted with Distilled Water. Odour and Taste purely alcoholic. 4 ounces with 30 grain-measures of the volumetric solution of Nitrate of Silver, exposed for twenty-four hours to bright light and then decanted from the black powder which has formed, undergo no further change when again exposed to light with more of the test.

These tests are intended to discover the presence of Fousel Oil, and the quantity of it.

*Medicinal Properties.*

Internally a powerful diffusible stimulant. Used in some states of acute disease characterized by excessive debility. Externally applied diluted to produce cold by evaporation; when evaporation is repressed, it acts as a stimulant. 1 of Rectified Spirit and 2 of Camphor Water mixed is a good evaporating lotion. Diluted, it forms a lotion for erysipelas, erythema, burns and scalds while the cuticle is entire, and for sprains and recent bruises.

(In all the Pharmacopœias.)

## Preparations.

**SPIRITUS TENUIOR.** PROOF SPIRIT.* Colourless.

Rectified Spirit, 5; Distilled Water, 3: mix.

Sp. g. 0·920.

**SPIRITUS VINI GALLICI.** Pale brown.

Spirit distilled from French wine. It has a peculiar flavour, and a light sherry colour derived from the cask in which it has been kept.

Sp. g. ·941. 100 parts contain 48 to 56 parts of Alcohol (by volume).

*Pure diluted spirit does not affect the biliary secretion.—Dr. Rutherford.*

**MISTURA SPIRITUS VINI GALLICI.**

French Brandy, 4 ozs.; Cinnamon Water, 4 ozs.; the yolks of 2 Eggs; Sugar, ½ oz.: mix.

A delicious dose in cases of prostration or last stages of fever.

*Dose.*—½ to 1½ ozs.

Stimulant, restorative.

The Spirits of the Pharmacopœias are as follows:—

| | Sp. g. | Percentage of Absolute Alcohol by Measure. | |
|---|---|---|---|
| **British** | ·838 | Spiritus Rectificatus | 84† |
| ,, | ·920 | 5 Spirit, 3 Water ,, Tenuior. | |
| **Austrian** | ·8336 | Sp. Vini | 90 |
| ,, | ·892 | ,, Dilutus | 70 |
| **Belgian** | ·813 | Alcohol at 33° | 96 |
| ,, | ·837 | ,, 28° | 89 |
| ,, | ·878 | ,, 20° | 75‡ |
| **Danish** | ·812—·815 | Spiritus Alcoholizatus | 95 |
| ,, | ·830—·834 | ,, Concentratus | 90 |
| ,, | ·890—·894 | ,, Dilutus | 70 |
| ,, | ·940 | ,, Tenuis | 45 |
| **French** | | Alcohol Absolu | 100 |
| ,, | | ,, at 95° | 95 |
| ,, | | ,, Rectifié | 90 |
| **German** | ·830 to ·834 | Spiritus | 90 |
| ,, | ·892 | ,, Dilutus<br>7 Spirit by Weight, and 3 Water | 69 |
| **Russian** | ·812 | Sp. Vini Alcoholizatus | 95 |
| ,, | ·833 | ,, Rectificatissimus | 90 |

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* When the sp. g. is ·920 it is called proof; if lighter than this, it is called above proof; if heavier than this, under proof; and the percentage of water, or of Rectified Spirit, by measure, sp. g. ·825, necessary to be added to any sample of spirit to bring it to the standard of proof spirit, indicates the number of degrees the given sample is above or below proof. Thus, if 100 volumes of a spirit require 10 volumes of water to reduce it to proof, it is said to be "10 over proof;" on the other hand, if 100 volumes of spirit require 10 volumes of spirit to raise it to proof, the sample is said to be "10 under proof."

† This strength is sometimes called "Trois-six" ($\frac{3}{6}$ths), because it requires $\frac{3}{6}$ths or half its volume of water to reduce it to Eau de Vie at 56° p. c. = Proof Spirit.

‡ Eau de Vie double.

| | Sp. g. | | | Percentage of Absolute Alcohol by Measure. |
|---|---|---|---|---|
| Russian | ·890 | | Sp. Vini Rectificatus | 70 |
| ,, | ·955 | | ,, Dilutus | 38 |
| U.S. | ·817 | | Alcohol Fortius. | |
| ,, | ·835 | | Alcohol. | |
| ,, | ·941 | 3 Spirit, 3 Water. | Alcohol Dilutum. | |
| ,, | | | Sp. Vini Gallici | 48 to 56 |

*Table of the Amount of absolute Alcohol by weight, or Proof-spirit (Brandy) by volume, in the following Wines, &c., from Dr. Christison's Experiments in* 1838.

| | Alc. by weight | Proof-sp. by vol. |
|---|---|---|
| | in 100 | parts. |
| Port, weakest | 14·97 | 30·56 |
| ,, mean of 7 wines | 16·20 | 33·91 |
| ,, strongest | 17·10 | 37·27 |
| White Port | 14·97 | 31·31 |
| Sherry, weakest | 13·98 | 30·84 |
| ,, mean of 13 wines not long in cask | 15·37 | 33·59 |
| ,, strongest | 16·17 | 35·12 |
| ,, mean of 9 wines long in cask in E. Indies | 14·72 | 32·30 |
| ,, Madre da Xeres | 16·90 | 37·06 |
| Madeira, long in cask in the East Indies | 14·09 | 30·80 |
| ,, strongest | 16·90 | 37·00 |
| Teneriffe, long in cask at Calcutta | 13·84 | 30·21 |

| | Alc. by weight | Proof-sp. by vol. |
|---|---|---|
| | in 100 | parts. |
| Sercial | 15·45 | 33·65 |
| Dry Lisbon | 16·14 | 34·71 |
| Shiraz | 12·95 | 28·30 |
| Amontillado | 12·63 | 27·60 |
| Claret, 1st growth, 1811 | 7·72 | 16·95 |
| Château-Latour, Do. 1825 | 7·78 | 17·06 |
| Rosan, 2nd growth, 1825 | 7·61 | 16·74 |
| Vin Ordinaire, Bordeaux | 8·99 | 18·96 |
| Rives Altes | 9·31 | 22·35 |
| Malmsey | 12·86 | 28·37 |
| Rudesheimer, first quality | 8·40 | 18·44 |
| ,, inferior | 6·90 | 15·19 |
| Hambacher, 1st qual. | 7·35 | 16·15 |
| Edinb. ale, unbottled | 5·70 | 12·60 |
| ,, 2 yrs. bot. | 6·06 | 13·40 |
| London porter, four months in bottle | 5·36 | 11·91 |

The alcohol of most true wines is derived solely from the fermentation of the sugar, or alteration of the acids contained in the grape-juice from which they are produced. In others the proportion is increased by adding starch-sugar before or during fermentation. In others, again, it is added directly in the form of brandy, partly to please the palate of consumers, partly because it is thought necessary to make the wine keep well. The strong wines commonly used in Britain, such as Port, Sherry, and the like, are almost all strengthened in this manner, and frequently also the inferior sorts of Bordeaux wine.

Not Official.

## STAPHISAGRIA.

The seeds have been used in ointments for many years, but it has been discovered that the activity rests in an oil which they contain in rather large quantities. Mr. Balmanno Squire experimented with this Oil, and also with the seeds from which the Oil had been withdrawn by Ether, and found the latter inert; he gives the following for an Ointment which he has found very successful in treating that troublesome skin complaint called Prurigo Senilis:—Oil of the Seeds, 1; Lard, 7: mix.

# STRAMONII FOLIA ET SEMINA.

## STRAMONIUM LEAVES AND SEEDS.

*Datura Stramonium*, an annual cultivated in Britain. The leaves collected when the plants are in flower, dried; and the ripe seeds.

**Its properties are due to the active principle Daturine, which can be obtained from the whole plant, but chiefly from the ripe fruit: it occurs in white crystals, as does the Sulphate.**

### *Medicinal Properties.*

Influences especially the respiratory organs. Much used in asthma; the leaf chiefly by smoking in the shape of cigarettes. The extract and the tincture made of the seeds are used in convulsive coughs as antispasmodics, and as anodynes in gastrodynia and other painful affections. The extract given with success for hay asthma. Like Belladonna, it causes dilatation of the pupil.

*Dose.*—Of the leaves powdered, 1 gr. and upwards.

(In all the Pharmacopœias.)

An Ointment of the fresh leaves relieves painful Cancer.

### Preparations.

**EXTRACTUM STRAMONII.** Black.

Pack Stramonium Seeds, coarsely powdered, in a percolator, and pass about their own weight of Washed Ether slowly through them, remove the Ether and set aside; now pour over them Proof Spirit until the seeds are exhausted. Distil off the spirit, and evaporate the residue by a water bath to a proper consistence for forming pills.

*Dose.*—¼ gr., gradually increasing.

(Belg. from fresh leaves, from dried leaves, and from seeds; Dan. and Russ. from dried leaves; Fr. and U.S. from dried leaves, also from seeds; Ger. from fresh leaves.)

**TINCTURA STRAMONII.** Light brown.

Stramonium Seeds, bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally; pack in a percolator, let it drain, and pour on the remaining spirit. When it ceases to drop, press, filter, and add proof spirit to make 8. =(1 in 8).

*Dose.*—10 to 20 minims.

(U.S.; Belg. and Fr. from leaves 1 in 5, also Alcoolature with fresh leaves and Spirit equal parts; Belg. also Ethereal; Dan. Ger. and Russ. from seeds 1 in 10; U.S. from seeds 1 and 7; all by weight.)

INCOMPATIBLES.—The Mineral Acids, Caustic Alkalies, Metallic Salts.

ANTIDOTES.—Same as for poisoning with Belladonna, page 64.

### Not Official.

GUTTÆ DATURINÆ.—Sulphate of Daturine, 2 grs.; Water, 1 oz.—*London Ophthalmic Hospital.*

# STRYCHNIA

[illegible]

[illegible] obtained from Nux Vomica.

[illegible] in 1818.

[illegible] and inodorous.

[illegible] Alcohol: insoluble [illegible]

[illegible] solution, which on [illegible] intensely violet hue, [illegible]

[illegible] Acid—indicating [illegible] with free access of [illegible]

[illegible] however, being in [illegible] of lead-poisoning, [illegible] in epilepsy, [illegible] poison.

[illegible]

[illegible] making into pills.

[illegible] Ger. and Russ. have also the [illegible] also the Sulphate.)

## [illegible]

[illegible]

[illegible] Hydrochloric Acid, 6 minims; [illegible] Water, 6 fl. drms.; mix the [illegible] the water, and dissolve the [illegible] the spirit and the remain- [illegible] = 1 grain in 120 minims.

[illegible]

[illegible] Strychnia.

[illegible] not in others.)

[illegible] for paralysis.

[illegible] Tinct. Aconite, Morphia, Tobacco, Hydrate [illegible]

[illegible] 3 grs. Strychnia. *Vide Lancet*, July 13, 1867.

[illegible] an antidote for 1 gr. of Strychnia.

[illegible] followed by an emetic, or the stomach- [illegible] dose in water, with 30 grs. of CHLORAL [illegible] without 10 grs. of Chloral, may be given every [illegible] NITRATE OF AMYL inhalations, the Amyl being [illegible] held close to the nose. The patient may be [illegible] OF ETHER. *Extract from "What to Do in Cases of* [illegible]

# STYRAX PRÆPARATUS.

## PREPARED STORAX.

A balsam prepared from the bark of *Liquidambar orientale* in Asia Minor, purified by means of Rectified Spirit and straining. Intense brown.

(Belg. Fr. Ger. and U.S.; not in Austr. Dan. and Russ.)

### *Medicinal Properties.*

Stimulant and expectorant. Similar in action to the Balsams of Peru and Tolu. Recommended also in gonorrhœa and leucorrhœa; said to be equal to Copaiba, and less disagreeable.

*Dose.*—10 to 20 grs. twice a day, gradually increasing.

Contained in Tinctura Benzoini Comp.

# SUCCI.

## JUICES.

Juices expressed from fresh medicinal plants, and preserved by the addition of Spirit, were introduced by the Author in 1835 (*Pharm. Journ.* vol. i.). By thus preserving the juice of the plant, its properties are not impaired by the action of air during the time necessary to dry the leaf for Tincture, nor by the action of both air and heat during the time necessary to evaporate the juice to the consistence of an Extract.

They were found in practice superior to the Tinctures, and have been since employed, especially by medical men in private practice, to the present time. Physicians will doubtless satisfy themselves of the value of these medicines now they have found a place in the British Pharmacopœia.

The following have been introduced into the British Pharmacopœia, the formulas for which will be found under the names of the drugs from which they are prepared:—

| | |
|---|---|
| SUCCUS BELLADONNÆ . . . | Dose, 5 to 15 mins. |
| SUCCUS CONII . . . . . . . | „ ½ to 1 drm. |
| SUCCUS HYOSCYAMI . . . . | „ ½ to 1 drm. |
| SUCCUS SCOPARII . . . . . | „ 1 to 2 drms. |
| SUCCUS TARAXACI. . . . . | „ 2 to 4 drms. |

These consist of 3 parts of Juice and 1 of Rectified Spirit.

Juices which are not official are enumerated in the Index.

The Alcoolatures of the Fr. are made by digesting equal weights of fresh plant and Rectified Spirit together for 10 days; press and filter. Aconite, Belladonna, Conium (Ciguë), Digitalis, Henbane (Jusquiame), Lettuce, Stramonium Leaves, Flowers of Colchicum, and Bulb of Colchicum, are so prepared.

Not Official.

## SUCCINI OLEUM.

### OIL OF AMBER.

Oil of Amber, 1; Spirit of Camphor, 1; Spirit of Hartshorn, 1: mix. A domestic embrocation for Hooping Cough: said to resemble Roach's.

TINCT. SUCCINI.—Amber, in fine powder, 1; Rectified Spirit, 16. Digest 7 days.

*Dose.*—25 minims in water for headache.

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Not Official.

## SULPHUR.

### SULPHUR.

S, eq. 32.

Sulphur occurs native, and is found in masses or in the powdery form mixed with various impurities. It is abundant in volcanic countries, as in Sicily, Naples, and the Roman States. It exists largely in this country in combination with Iron and Lead. It readily sublimes, and when sublimed and washed is called washed or sublimed Sulphur.

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## SULPHUR PRÆCIPITATUM.

### PRECIPITATED SULPHUR.

A greyish-yellow soft powder, free from grittiness, and with no smell of Sulphuretted Hydrogen. When heated in an open vessel, it burns with a blue flame and the evolution of Sulphurous Acid.

*Test.*—Entirely volatilized by heat: under the microscope it is seen to consist of opaque globules without any admixture of crystalline matter; otherwise corresponds with Sublimed Sulphur.

### *Medicinal Properties.*

Similar to those of Sulphur Sublimatum, only more active. Mixed with Milk and rubbed till smooth children take it readily.

*Dose.*—20 to 60 grs.

(In all the Pharmacopœias; Fr. Soufre Précipité.)

Precipitated Sulphur, 2; Subcarb. Potash, 1; Lard, 8: mix.

Excellent for Scabies.

LAC SULPHURIS of former Pharmacopœias contained a large amount of Sulphate of Lime.

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## SULPHUR SUBLIMATUM.

### SUBLIMED SULPHUR.

A slightly gritty powder of a fine greenish-yellow colour; without taste and without odour until heated.

*Tests.*—Entirely volatilized by heat, does not redden moistened litmus paper—indicating absence of Sulphurous and Sulphuric Acids. Solution of Ammonia, agitated with it and filtered, does not on evaporation leave any residue—indicating the absence of Sulphide of Arsenic.

Insoluble in water. Soluble in Oils and Turpentine with heat.

### *Medicinal Properties.*

Laxative, diaphoretic, and resolvent; evidently passes off by the pores of the skin. It is chiefly employed in hemorrhoidal affections and chronic rheumatism; externally for skin diseases, especially scabies. Sometimes used as a dentifrice.

*Dose.*—As a stimulant, from 10 grs. upwards; as a laxative, in treacle or milk, 20 to 60 grs. or more.

(In all the Pharmacopœias; Fr. Fleur de Soufre Lavée.)

## Preparations.

**CONFECTIO SULPHURIS.** Yellow.

Sublimed Sulphur, 4; Acid Tartrate of Potash, 1; Syrup of Orange Peel, 4: triturate. =(1 in 2¼).

*Dose.*—60 to 120 grs.

(Not in other Pharmacopœias.)

**UNGUENTUM SULPHURIS.** Yellow.

Sublimed Sulphur, 1; Benzoated Lard, 4: mix. =(1 in 5).

(Belg. 1 in 5; Fr. Pommade, 1⅓ in 5½, Cérat, 1 in 6½; Ger. Russ. and U.S. 1 in 3.)

Precipitated Sulphur makes a more active Ointment, and Essence of Lemon covers the odour.

### Not Official.

**Chelsea Pensioner.**—Sulphur, 6; Mustard, 6; Powdered Guaiacum, 3; Rhubarb, 1½; Nitre, 1½: mix. Honey or treacle sufficient to make it into an Electuary.

*Dose.*—A teaspoonful every alternate evening for rheumatism; it is also taken in the morning as an aperient to regulate the bowels.

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## SULPHURIS IODIDUM.

### IODIDE OF SULPHUR.

### SI, eq. 159.

Iodine, 4; Sublimed Sulphur, 1: rub together in a dry mortar, transfer to a flask and liquefy by a gentle heat, allow it to cool and solidify. Black.

The Iodine should be the dry sublimed Iodine, and the Sulphur should be dried before mixing it with the Iodine.

Solubility, 1 in 60 of Glycerine. Insoluble in water.

(Belg. Fr. Ger. Russ. and U.S.; not in Austr. and Dan.)

### Preparation.

**UNGUENTUM SULPHURIS IODIDI.** Black.

Iodide of Sulphur, 30 grs.; Lard, 1 oz.: mix. An excellent remedy for acne punctata and other eruptions of the skin. =(about 1 in 15½).

(Fr. Pommade, 1 in 20; U.S. 1 in 17; not in others.)

## SUMBUL RADIX.

### SUMBUL ROOT.

Musk Root, reported to be the roots of the perennial *Euryangium Sumbul.* Imported from Russia and India.

In slices of two to four inches in diameter, possessing the odour of musk, which it long retains.

(Russ; not in other Pharmacopœias.)

### *Medicinal Properties.*

A nervous stimulant in low typhoid fevers, and in asthenic cases of dysentery, diarrhœa, and malignant cholera. Valuable in delirium tremens.

### Preparation.

**TINCTURA SUMBUL.** Reddish-brown.

Sumbul Root, bruised fine, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally; pack in a percolator, let it drain, and pour on the remainder of the spirit, and when it ceases to drop, press, filter, and add proof spirit to make up 8. =(1 in 8).

*Dose.*—15 to 30 minims.

(Russ. 1 and 5, by weight; not in others.)

## SUPPOSITORIA.

Suppositories are prepared by the following general formula:—

Mix the Medicinal portion with a small quantity of the Oil of Theobroma, by rubbing them together, and add the mixture to the remainder of the Oil of Theobroma, previously melted and cooled to 95° F. Then mix thoroughly without applying more heat, and immediately pour the mixture into suitable moulds. The moulds, previously made cold, must be kept so by immersion in iced water.

All difficulty in removing the suppositories from the moulds may be obviated by having the moulds previously dusted with Lycopodium.

| | Each contains |
|---|---|
| SUPPOSITORIA ACIDI CARBOLICI c. SAPONE. | 1 gr. |
| SUPPOSITORIA ACIDI TANNICI. | 3 grs. Tannic Acid. |
| SUPPOSITORIA ACIDI TANNICI c. SAPONE. | 3 grs. |

| | Each contains |
|---|---|
| SUPPOSITORIA HYDRARGYRI. | 5 grs. Mercurial Ointment. |
| SUPPOSITORIA MORPHIÆ. | ½ gr. Hydrochlorate of Morphia. |
| SUPPOSITORIA MORPHIÆ c. SAPONE. | ½ gr. |
| SUPPOSITORIA PLUMBI COMPOSITUM. | 3 grs. Acetate of Lead,<br>1 gr. Powdered Opium. |

Suppositories, not official, are enumerated in the Index.

Not Official.

## SYMPHYTI RADIX.

COMMON COMFREY ROOT.

*Syn.* CONSOUDE, *Fr.*

The root is black without and white within. Flowers yellow, common in ditches near rivers.

*Medicinal Properties.*—Astringent, mucilaginous, glutinous; useful to form cases for injured limbs. The black rind is scraped off, and the mucilaginous root is then scraped carefully into a nice even pulp; this spread of the thickness of a crown-piece upon cambric or old muslin, is wrapped round the limb and bandaged over; it shortly stiffens, and forms a casing superior to starch, giving support and strength to the part. The Author knew a bone-setter who practised more than fifty years ago, and rendered himself famous for setting compound fractures with this root, which he kept secret, and he never removed the bandage after the first dressing, until the limb was well.

## SYRUPI.

SYRUPS.

Syrups are apt to ferment or mould when made with too little sugar, and to crystallize when too concentrated; to avoid these inconveniences which have arisen from former instructions for the preparation of this class of medicines, the British Pharmacopœia directs that the product of each syrup shall be made up to one constant weight, thereby ensuring uniformity of consistence, which is perhaps good as a practical guide as taking the specific gravity, when cooled to 60° F. The Dublin Pharmacopœia directed that in the case of simple syrup the specific gravity should be given, namely, 1·330, and this gravity is a very proper one for ordinary temperatures, but it must be understood that if the syrup be exposed to a very low temperature, say 40° F., it may crystallize. It keeps perfectly well, however, at a range of temperature from 50° F. upwards. Of course the more refined the sugar, the cleaner and lighter in colour will be the syrup, but even with the best sugar a little scum will form on the surface, which must be removed; when straining is required, it must be done whilst the syrup is hot, and through flannel, returning the first runnings, if not quite bright, into the bag. Syrups keep best in full bottles; when a bottle has remained half empty a short time, although of the right density at first, it is very apt to crystallize; and when kept in large jars, say of from 8 to 10 gallons, with loose covers, the sides are generally studded with crystals, and the syrup is thus frequently rendered too weak to keep when sent out. To prevent fermentation, for instance, in the Syrup of Poppies, several additions have been proposed to be made, but they have not succeeded, because in our former processes for preparing the syrup, the matter which is the cause of the fermentation was not removed; in the new process Rectified Spirit is employed for that purpose, and the result is that Syrup of Poppies, which in the summer frequently fermented so much that it rushed out of the bottles, now remains unaltered. It is, however, necessary that no more spirit be added than is ordered, for a larger quantity is very apt to cause deposition of crystals.

In making simple syrup from any sugar requiring white of egg to render it perfectly bright, the egg should be beaten into a froth, and not added till the syrup has become hot enough to coagulate it; it should then be poured quickly in, and well stirred up with the syrup; the air enclosed in the froth causes the coagulated albumen to rise to the surface, so that it may be effectually removed by skimming, whereas, if it is mixed with the syrup before it is heated, the air escapes as it warms up, and a good part of the albumen does not rise; still, by straining the syrup it may be made bright.

Syrup of Lemon Juice, if kept long, deposits grape sugar, and should therefore be made in smaller quantity, and more frequently than the other syrups. The Syrups of Orange and Ginger are now made from their tinctures, which give just as good a flavour, and produce much brighter syrups, besides the advantage of avoiding the starch and other matters which were contained in the former syrups. The Syrup of Rose is now made with the red roses. The Syrup of Senna, which was previously the exception of the syrups, being prepared with treacle, is now made with refined sugar like the rest, and being treated like the Poppies, no longer ferments; it is very palatable and sufficiently active. The Syrup of Tolu is made by the London process. Syrup of Violets and others of little medicinal value have not been admitted into the British Pharmacopœia.

A good and expeditious method of making Syrup of Iodide of Iron is introduced; still the Iodide is not entirely protected by the sugar from change; a coil of Iron wine protects it.

The only way in which this can be effectually done is by a solution in water, having a coil of iron-wire reaching throughout the whole length of the column, as originally proposed by the Author.

The following are the syrups of the British Pharmacopæia, the formulas for which will be found under the names of the drugs from which they are prepared:—

| Dose. | | |
|---|---|---|
| | SYRUPUS. *See* SACCHARUM . . . . . . . . | Sugar 1 in 1⅓. |
| 1 drm. . | SYRUPUS AURANTII . . . . . . . . . . | Tinct. 1 in 8. |
| 1 drm. . | SYRUPUS AURANTII FLORIS . . . . . . . . . | 1 in 6⅓. |
| ½ to 2 drs. | SYRUPUS CHLORAL . . . . . . . . . . . . | 1 in 6. |
| ½ drm. . | SYRUPUS FERRI IODIDI, 4⅓ grs. in each drachm . | 1 in 14 |
| 1 drm. . | SYRUPUS FERRI PHOSPHATIS, 1 gr. in each drachm. | |

| Dose. | | |
|---|---|---|
| 1 drm. . | SYRUPUS HEMIDESMI | 1 in 8. |
| 1 drm. . | SYRUPUS LIMONIS | Juice 1 in 2. |
| 1 drm. . | SYRUPUS MORI | Juice 1 in 2. |
| 1 drm. . | SYRUPUS PAPAVERIS | Capsules 1 in 2¼. |
| 1 drm. . | SYRUPUS RHAMNI. | |
| 1 drm. . | SYRUPUS RHEI | Root 1 in 14. |
| 1 drm. . | SYRUPUS RHŒADOS | Petals 1 in 3½. |
| 1 drm. . | SYRUPUS ROSÆ GALLICÆ | Petals 1 in 17¼. |
| ½ drm. . | SYRUPUS SCILLÆ | 1 in 17. |
| 1 drm. . | SYRUPUS SENNÆ | 1 in 2. |
| 1 drm. . | SYRUPUS TOLUTANUS. *See* BALS. TOLU. | |
| 1 drm. . | SYRUPUS ZINGIBERIS | Strong Tinct. 1 in 26. |

Syrups that are not official are enumerated in the Index.

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## TABACI FOLIA.

### LEAF TOBACCO.

The dried leaves of the Virginian Tobacco, *Nicotiana Tabacum*, cultivated in America.

In large, mottled brown, ovate or lanceolate, acuminate leaves, bearing numerous short glandular hairs, having a peculiar heavy odour and nauseous-bitter acrid taste.

*Test.*—Not in a manufactured state.

*Medicinal Properties.*

A powerful sedative, especially affecting the heart, frequently causing great depression. Narcotic and emetic. Smoked, it is sedative and expectorant in various cases of asthma. Occasionally used as snuff for affections of the head. It is dangerous on account of its poisonous properties, but useful as an antidote to the poison of Strychnia (*see* NUX VOMICA).

(Belg. Dan. Ger. and Russ. Folia Nicotiana; U.S. Tabacum; not in others.)

ANTIDOTES.—In case Tobacco has been swallowed, an emetic; in any case stimulants internal and external. Professor Haughton, of Dublin, relies on Strychnia as an antidote for Tobacco, and on Tobacco for Strychnia.

From the leaf of the plant is obtained—

NICOTIN, a nearly colourless volatile liquid alkaloid, sp. g. 1·048, of an acrid burning taste, inflammable, miscible with water, ether, alcohol, and the fixed oils; capable of being formed into crystalline salts; its formula is $C_{10}H_{14}N_2$, eq. 162. To this alkaloid Tobacco owes its activity. Nicotin is a powerful poison.

(Russ; not in others.)

### Preparation.

**ENEMA TABACI.**

Leaf Tobacco, 20 grs.; boiling Water, 8 ozs.: infuse half an hour, and strain.

For one enema.

(Not in other Pharmacopœias.)

Used in strangulated hernia, obstinate constipation, and retention of urine.

## TAMARINDUS.

### TAMARIND.

The preserved pulp of the fruit of *Tamarindus Indica,* imported from the West Indies.

*Test.*—A piece of bright iron left in contact with the pulp for an hour does not exhibit any deposit of copper—the Tamarind acid would take up Copper if such vessels were used.

### *Medicinal Properties.*

Refrigerant and slightly laxative. Infused with water, forms a cooling drink in febrile affections.

*Dose.*—½ oz. and upwards.

(In all the Pharmacopœias.)

Contained in Confectio Sennæ.

## TARAXACI RADIX.

### DANDELION ROOT.

The fresh roots of *Taraxacum Dens-Leonis,* gathered between September and February from meadows and pastures in Britain.

Much difference of opinion exists as to the proper time of taking up the root. Some think that the winter, when it yields the thick albuminous juice, is the best; others prefer the thin and bitter juice yielded by the root in the early summer. The Author inclines to the former opinion, and has so expressed himself in an article furnished to Mr. Brande,* and inserted by him in his "Materia Medica," published in 1839. Observations made throughout the year are there given. Juice taken from roots dug up in November, before any frost appeared, had a specific gravity of 1·080; 28 pounds of root yielded 7 pounds of juice, from which, when heated to 212° F., besides 4 ounces of insoluble matter, it left on evaporation 28 ounces of extract. This is not a correct average, for when in the highest perfection—

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* Brande's "Materia Medica," published in 1839, is now very scarce; the following interesting facts have been copied from it to show the quantity of juice required to produce 1 lb. of extract in the different months.

"In January and February, 4 to 5 lbs.; in March, 6 or 7 lbs.; in April and May, 8 to 9 lbs.; June, July, and August, 6 to 7 lbs.; in September and October, 4 to 5 lbs.; in November and December, 4 lbs. During November and December the root is in the most vigorous condition, and most abundant in those ingredients upon which its medicinal powers depend. Frost has a singular effect upon the growing roots, causing the bitterness to decrease, and sweetness to take its place; it is also observable, on the disappearance of the frost, the sweetness disappears and the bitter returns in a stronger degree. From Mr. Squire's analysis, Taraxacum juice contains gum, albumen, gluten, an odorous principle, and a crystallizable bitter principle, soluble in alcohol and water."

100 of fresh root yield 30 of juice=8 of extract. 100 of root, when dried, weigh 25.

### *Medicinal Properties.*

A mild laxative, acting specially on the liver. In dropsy, arising from obstruction of the liver, it is given in combination with purgatives.

*A very feeble stimulant of the liver.—Dr. Rutherford.*

(In all the Pharmacopoeias; Fr. Pissenlit.)

### Preparations.

**DECOCTUM TARAXACI.**

Dried Dandelion Root, sliced and bruised, 1; Distilled Water, 20: boil ten minutes and strain. The produce should be made up to 20. =(1 in 20).

*Dose.*—2 to 4 oz.

(Belg. whole plant 1 in 20; not in others.)

**EXTRACTUM TARAXACI.** Light brown; deepens with age.

Crush fresh Dandelion Root, press out the juice, and allow it to deposit; heat the clear liquor to 212° F., and maintain the temperature for ten minutes; then strain and evaporate by a water bath at a temperature not exceeding 160° F. to a proper consistence.

100 pounds of fresh root yield 30 pounds of juice=8 pounds of extract.

*Dose.*—5 to 15 grs.

(U.S. from fresh root; Fr. from Juice of Leaves; Austr. Belg. Dan. Ger. and Russ. from whole plant.)

**SUCCUS TARAXACI.** Deep brown.

Bruise Dandelion Root in a stone mortar, press out the juice, and to every 3 measures of juice add 1 of Rectified Spirit: set aside seven days and filter. Keep it in a cool place.

*Dose.*—2 to 4 drms.

(U.S. Juice 5, Alcohol 1; Belg. the juice is merely coagulated and strained; no spirit is used.)

## TEREBINTHINA CANADENSIS.

CANADA BALSAM.

The Turpentine obtained from the stem of *Abies balsamea* by incision, in Canada. Pale straw.

*Dose.*—5 grains in a pill with half its weight of calcined Magnesia.

(U.S.; not in others.)

Contained in Charta Epispastica, Collodion Flexile.

# TEREBINTHINÆ OLEUM.

## OIL OF TURPENTINE.

The oil distilled from the oleo-resin (Turpentine) which exudes from *Pinus palustris* or *P. Pinaster*, and *P. Tæda*, imported from America and France. Colourless.

Oil of Turpentine dissolves Wax, Iodine, Sulphur, Phosphorus, fixed oils, and resins forming varnish.

Solubility, 1 in 10 of Rectified Spirit. Remains transparent with Chloroform in all proportions.

### *Medicinal Properties.*

Stimulant, diuretic, occasionally diaphoretic, anthelmintic; 5 mins. three times a day for hemorrhage from the lungs; in large doses purgative, sometimes causing nausea, vomiting, and intoxication. It especially affects the kidneys, and the mucous membrane of the genito-urinary organs. Is given in doses of 2 to 4 drms. in puerperal fever. Antispasmodic in hysterical affections. Externally rubefacient; employed as a liniment in chronic inflammation. A good liniment for rheumatism is made thus: Turpentine, 1; Chloroform of Belladonna, ½; Soap Liniment, 2½: mix.

Flies and gnats are kept away by the odour of Turpentine.

*Dose.*—10 to 30 minims; as an anthelmintic, 2 to 4 drms. May be given in Mistura Amygdalæ.

(In all the Pharmacopœias; Dan. Ætheroleum Terebinthinæ.)

1 drm. of Mucilage, with diligent trituration, renders ½ drm. of Oil of Turpentine emulsive, with 1 oz. of Distilled Water.

30 grs. Powder of Acacia rubbed first with 1 drm. of Oil of Turpentine, then with 1 drm. of Water, and lastly triturating whilst adding gradually 1 oz. Distilled Water, makes a good emulsion.

## Preparations.

**CONFECTIO TEREBINTHINÆ.** Light olive-brown.

Oil of Turpentine, 1; Liquorice Powder, 1; Clarified Honey, 2: mix. =(1 in 4).

Rub the first two together, and add the Honey; but if the Turpentine separates pour it off, and re-add it gradually with constant trituration, and it will unite.

*Dose.*—60 to 240 grs. daily; for Tænia, 2 to 4 oz.

(Not in other Pharmacopœias.)

It is much used in Dublin as a diffusible stimulant in chronic bronchitis, and is very palatable if rubbed up with Peppermint Water.

**ENEMA TEREBINTHINÆ.**

Oil of Turpentine, 1 oz.; Mucilage of Starch, 15 ozs.: mix for 1 enema.

(Not in other Pharmacopœias.)

**LINIMENTUM TEREBINTHINÆ.** Fawn-coloured emulsion.

Oil of Turpentine, 16; Camphor, 1; Soft Soap, 2: dissolve the camphor in the turpentine, then add the soap; rub till thoroughly mixed. =(1 in 1⅕).

(U.S. Resin Cerate 3, Ol. Turpentine 2; Belg. 9½ in 10; Fr. 1 in 2; not in others.)

**LINIMENTUM TEREBINTHINÆ ACETICUM.** Separates as soon as shaking has ceased.

Oil of Turpentine, 1; Acetic Acid, 1; Liniment of Camphor, 1: mix. =(1 in 3).

St. John Long's celebrated Liniment.

**UNGUENTUM TEREBINTHINÆ.** Yellowish brown.

Oil of Turpentine, 1 oz.; Resin, in powder, 60 grs.; Yellow Wax, ½ oz.; Prepared Lard, ½ oz.: melt the ingredients together over a water bath, remove the vessel and stir till cold. =(1 in 2⅛).

(Dan. and Ger. also Russ. (Ung. Basilicum) differ from this in composition; not in others.)

## THEOBROMÆ OLEUM.

*Syn.* CACAO BUTTER.

A concrete oil, obtained by expression and heat from the ground seeds of *Theobroma Cacao.*

(Austr. Belg. Dan. Ger. and Russ. Oleum Cacao; Fr. Beurre de Cacao; U.S. Oleum Theobromæ.)

Occurs in cakes of a yellowish colour and of a pleasant odour resembling chocolate. Does not become rancid from exposure to air. Melts at about 95° F. *Brit. Ph.*

Contained in all the suppositories.

**Not Official.**

The following form good bases for suppositories:—

| | |
|---|---|
| Theobroma Oil, when melted, begins to solidify at . . | 72° F. |
| Stearine of Cocoa-nut Oil ,, ,, ,, ,, . . | 75° F. |
| 4 of Stearine and 2 Mutton Fat ,, ,, ,, . . | 77° F. |
| 4 of Stearine and 1 Spermaceti ,, ,, ,, . . | 80° F. |

Stearine alone is perhaps a better substance than Cacao Butter for making suppositories. It begins to solidify at 78° F., but there is Stearine that solidifies at 120° F.; this will not answer for suppositories.

## THERIACA.

TREACLE.

*Syn.* SACCHARI FÆX, *Lond.*

The uncrystallized residue of the refining of Sugar. Golden Syrup of Commerce. Intense brown.

Sp. g. 1·40.

*Test.*—Nearly free from empyreumatic odour or flavour.

*Medicinal Properties.*

Demulcent, nutrient, and slightly laxative. A favourite condiment in pharmacy, chiefly employed to make pills, for which, on account of its retentiveness of moisture, it is well adapted.

(Not in other Pharmacopœias.)

Contained in Pil. Assafœt. Comp., Pil. Rhei Comp., Pil. Scillæ Comp.

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## THUS AMERICANUM.

### COMMON FRANKINCENSE.

The concrete Turpentine of the Frankincense Pine, *Pinus Tæda,* and the Swamp Pine, *P. palustris,* from the Southern States of North America.

A softish bright yellow opaque solid, resinous but tough, having the odour of American turpentine.

The true Thus is *Pix Burgundica,* from the Spruce Fir, *Abies excelsa. See* PIX BURGUNDICA, page 238.

(Fr. only.)

*Medicinal Properties.*

Used externally as a stimulant.

Contained in Emplastrum Picis.

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Not Official.

## THYMOL.

Colourless, transparent crystals, with an aromatic odour.

Solubility: 1 in 1000 of Water; 1 in 190 of Glycerine; 2 in 1 of Rectified Spirit; 1 in 3 of Olive Oil, and measures 4.

Lewin states that a solution of 1 part in 1000 of water is a very powerful antiseptic, that it arrests fermentation in a solution of Sugar and Yeast better than either Carbolic Acid or Salicylic Acid, and that it also arrests putrefaction of animal matters. *B. M. Journal,* May 22nd, 1875.

It certainly is very useful in lying-in hospitals, doing away with the unpleasant odour of decomposing animal matters.

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## TINCTURÆ.

### TINCTURES.

Many of these have been directed by the British Pharmacopœia to be made by percolation, and as this operation imposes several conditions to be complied with in order that it may be efficiently performed, directions on the subject will be found immediately after the group of Tinctures.

The following are the Tinctures of the British Pharmacopœia, the formulas for which will be found under the names of the drugs from which they are prepared; all are made with Proof Spirit unless otherwise stated.

| Dose. | | Proportion of active ingredients in the mass. | |
|---|---|---|---|
| 10 min. | TINCTURA ACONITI | 1 in 8 | Rect. Sp. |
| 1 drm. | TINCTURA ALOES | 1 in 40. | |
| 1 drm. | TINCTURA ARNICÆ | 1 in 20 | Rect. Sp. |
| ½ drm. | TINCTURA ASSAFŒTIDÆ | 1 in 8 | Rect. Sp. |
| 1 drm. | TINCTURA AURANTII | 1 in 10. | |
| 1 to 2 drm. | TINCTURA AURANTII RECENTIS | | Rect. Sp. |
| 5 min. | TINCTURA BELLADONNÆ | 1 in 20. | |
| ½ drm. | TINCTURA BENZOINI COMP. | 1 in 10 | Rect. Sp. |
| 1 drm. | TINCTURA BUCHU | 1 in 8. | |
| ½ drm. | TINCTURA CALUMBÆ | 1 in 8. | |
| 15 min. | TINCTURA CAMPHORÆ COMPOSITA. | | |
| | Opium 1, Benzoic Acid 1, Camphor ¾, in 240. | | |
| 5 min. | TINCTURA CANNABIS INDICÆ (Extract) | 1 in 20 | Rect. Sp. |
| 5 min. | TINCTURA CANTHARIDIS | 1 in 80. | |
| 10 min. | TINCTURA CAPSICI | 1 in 27 | Rect. Sp. |
| ½ drm. | TINCTURA CARDAMOMI COMP. | 1 in 80. | |
| ½ drm. | TINCTURA CASCARILLÆ | 1 in 8. | |
| ½ drm. | TINCTURA CASTOREI | 1 in 20 | Rect. Sp. |
| 1 drm. | TINCTURA CATECHU | 1 in 8. | |
| 15 min. | TINCTURA CHIRATÆ | 1 in 8. | |
| 20 min. | TINCTURA CHLOROFORMI COMP. | 1 in 10 | Rect. Sp. |
| ½ drm. | TINCTURA CINCHONÆ COMP. | 1 in 10. | |
| 1 drm. | TINCTURA CINCHONÆ FLAVÆ | 1 in 5. | |
| ½ drm. | TINCTURA CINNAMOMI | 1 in 8. | |
| 30 min. | TINCTURA COCCI | 1 in 8. | |
| 15 min. | TINCTURA COLCHICI SEMINUM | 1 in 8. | |
| ½ drm. | TINCTURA CONII (FRUCTUS) | 1 in 8. | |
| ½ drm. | TINCTURA CROCI | 1 in 20. | |
| ½ drm. | TINCTURA CUBEBÆ | 1 in 8 | Rect. Sp. |
| 10 min. | TINCTURA DIGITALIS | 1 in 8. | |
| 15 min. | TINCTURA ERGOTÆ. | 1 in 4. | |
| 5 min. | TINCTURA FERRI ACETATIS | | Rect. Sp. |
| 10 min. | TINCT. FERRI PERCHLORIDI . (Liquor) | 1 in 4 | Rect. Sp. |
| ½ drm. | TINCTURA GALLÆ | 1 in 8. | |
| 1 drm. | TINCTURA GENTIANÆ COMP. | 1 in 13⅓. | |

| Dose. | | Proportion of active ingredients in the mass. | |
|---|---|---|---|
| ½ drm. | TINCTURA GUAIACI AMMONIATA | 1 in 5. | Arom. Sp. Ammon. |
| 15 min. | TINCTURA HYOSCYAMI | 1 in 8. | |
| 5 min. | TINCTURA IODI . Iodine 1, Iodide Potass. | ½ in 40 | Rect. Sp. |
| ½ drm. | TINCTURA JALAPÆ | 1 in 8. | |
| ½ drm. | TINCTURA KINO | 1 in 10 | Rect. Sp. |
| 1 drm. | TINCTURA KRAMERIÆ | 1 in 8. | |
| 20 min. | TINCTURA LARICIS | 1 in 8 | Rect. Sp. |
| ½ drm. | TINCTURA LAVANDULÆ COMP. (Oil) | 1 in 213 | Rect. Sp. |
| ½ drm. | TINCTURA LIMONIS | 1 in 8. | |
| 10 min. | TINCTURA LOBELIÆ | 1 in 8. | |
| 10 min. | TINCTURA LOBELIÆ ÆTHEREA | 1 in 8 | Sp. Ether. |
| ½ drm. | TINCTURA LUPULI | 1 in 8. | |
| ½ drm. | TINCTURA MYRRHÆ | 1 in 8 | Rect. Sp. |
| 10 min. | TINCTURA NUCIS VOMICÆ | 1 in 10 | Rect. Sp. |
| 10 min. | TINCTURA OPII | 1 in 13½. | |
| ½ drm. | TINCTURA OPII AMMONIATA | 1 gr. in 96 min. | Rect. Sp. |
| | TINCTURA PYRETHRI | 1 in 5 | Rect. Sp. |
| 1 drm. | TINCTURA QUASSIÆ | 1 in 27. | |
| 1 drm. | TINCTURA QUINIÆ | 1 gr. in 60 min. | Tr. Orange. |
| 1 drm. | TINCTURA QUINIÆ AMMONIATA | 1 gr. in 60 min. | |
| 1 drm. | TINCTURA RHEI | 1 in 10. | |
| 15 min. | TINCTURA SABINÆ | 1 in 8. | |
| 15 min. | TINCTURA SCILLÆ | 1 in 8. | |
| ½ drm. | TINCTURA SENEGÆ | 1 in 8. | |
| 2 drm. | TINCTURA SENNÆ | 1 in 8. | |
| ½ drm. | TINCTURA SERPENTARIÆ | 1 in 8. | |
| 10 min. | TINCTURA STRAMONII | 1 in 8. | |
| 10 min. | TINCTURA SUMBUL | 1 in 8. | |
| 15 min. | TINCTURA TOLUTANA—*See* BALSAM | 1 in 8 | Rect. Sp. |
| 1 drm. | TINCTURA VALERIANÆ | 1 in 8. | |
| ½ drm. | TINCTURA VALERIANÆ AMMONIATA | 1 in 8 | Arom. Sp. Ammon. |
| 5 min. | TINCTURA VERATRI VIRIDIS | 1 in 5 | Rect. Sp. |
| 15 min. | TINCTURA ZINGIBERIS | 1 in 8 | Rect. Sp. |
| 5 min. | TINCTURA ZINGIBERIS FORTIOR | 1 in 2 | Rect. Sp. |

Tinctures that are not official are enumerated in the Index.

## DIRECTIONS FOR PERCOLATING TINCTURES.

After the materials have been macerated for forty-eight hours in three-fourths of the menstruum ordered, percolation will be most efficiently performed by decanting the liquid, pressing the ingredients in the hand, and carefully packing them, in small portions at a time, in a conical percolator, so that the mass shall be uniformly tight throughout. The decanted liquid may then be poured upon the ingredients and allowed to percolate; the remainder of the menstruum being afterwards poured upon them in order to chase the strong tincture out. As soon as the liquid ceases to drop, the ingredients are to be removed and pressed. Any deficiency in the product may be made up by adding more of the menstruum and repeating the pressure.

The author prefers Burton's process, combined with the abstraction of air from the ingredients; thus tie up the ingredients and suspend them *submerged* in the upper part of the liquid, fit an elastic cap connected with an exhausting syringe to the neck of the vessel. When the air has been thus abstracted from the structure of the materials, and the atmosphere readmitted, its pressure drives the liquid into every part the air had preoccupied, and complete digestion begins, the impregnated liquid constantly falling by its gravity, allows the fresh liquid to penetrate and continue the exhausting process until finished.

## TRAGACANTHA.

### TRAGACANTH.

A gummy exudation from the stem of *Astragalus verus*, collected in Asia Minor. Nearly white.

Sparingly soluble in cold water.

*Tests.*—After maceration in cold water, the fluid portion is not precipitated by the addition of Rectified Spirit—indicating absence of Acacia Gum; and the gelatinous mass, when boiled and cooled, is not turned blue by Tincture of Iodine—indicating absence of Starch.

### *Medicinal Properties.*

Demulcent. Used for the suspension of heavy insoluble powders in liquids; the compound powder equal to the weight of the powder itself may be used.

*Dose.*—Of the powder, 20 grs. upwards.

(Belg. Dan. Fr. Ger. Russ. and U.S.; not in Austr.)

### Preparations.

**MUCILAGO TRAGACANTHÆ.** Should be made as required.

Tragacanth in powder, 60 grs.; Distilled Water, 10 ozs. To the water contained in a pint bottle add the Tragacanth, agitate briskly for a few minutes, and again at short intervals, until the Tragacanth is perfectly diffused and finally has formed a mucilage. =(1 in 73).

*Dose.*—1 oz. upwards.

(Belg. 1 in 84; Fr. Mucilage de Gomme Adragante 1 in 10; Russ. Tragacanth 4, Acacia 1, Water 480; U.S. 1 in 15; not in others.)

One part of Tragacanth gives more viscosity to water than 25 parts of Gum Arabic.

A good excipient for pills is, Tragacanth in powder, 1; Glycerine, 4; rubbed together and kept for use.

**PULVIS TRAGACANTHÆ COMPOSITUS.** White.

Tragacanth in powder, 1; Gum Acacia in powder, 1; Starch in powder, 1; Refined Sugar in powder, 3: rub well together.

=(1 in 6).

*Dose.*—10 to 60 grs.

(Not in other Pharmacopœias.)

Not Official.

## TRIFOLIUM.

CLOVER.

Syrupus.—A teaspoonful 3 or 4 times a day for Whooping Cough.

Not Official.

## TRITICUM REPENS.

CREEPING COUCH GRASS.

**DECOCTUM TRITICI.**

Root, 1 oz.; Water, 20 ozs.: boil ten minutes, and strain when cold.

*Dose.*—4 to 8 ozs. three times a day for mucous discharge from the bladder.

(Fr. Chien-dent.)

## TROCHISCI.

LOZENGES.

The following are the Lozenges of the British Pharmacopœia:—

| | | Quantity of the active ingredient contained in each lozenge. |
|---|---|---|
| TROCHISCI ACIDI TANNICI | | $\frac{1}{2}$ grain. |
| TROCHISCI BISMUTHI | | 2 grains. |
| TROCHISCI CATECHU | | 1 grain. |
| TROCHISCI FERRI REDACTI | | 1 grain. |
| TROCHISCI IPECACUANHÆ | | $\frac{1}{4}$ grain. |
| TROCHISCI MORPHIÆ | (Hydrochlorate) | $\frac{1}{36}$ grain. |
| TROCHISCI MORPHIÆ ET IPECAC. | „ | $\frac{1}{36}$ and $\frac{1}{12}$ gr. Ipecac. |
| TROCHISCI OPII | (Extract) | $\frac{1}{10}$ grain. |
| TROCHISCI POTASSÆ CHLORATIS | | 5 grains. |
| TROCHISCI SODÆ BICARBONATIS | | 5 grains. |

Lozenges that are not official are enumerated in the Index.

Black currant paste is a most convenient substance for making Lozenges of any special drug.

# ULMI CORTEX.

## ELM BARK.

The dried inner bark of *Ulmus campestris*, deprived of its outer layer; from trees indigenous to and cultivated in Britain.

### *Medicinal Properties.*

Bitter, demulcent, slightly tonic, astringent, and diuretic. Used in herpetic eruptions.

(U.S. Ulmus Fulva (Slippery Elm); Fr. Orme Champêtre; not in others.)

### Preparation.

**DECOCTUM ULMI.**

Elm Bark, cut in small pieces, 1; Distilled Water, 8: boil 10 minutes, strain, and make up to 8. =(1 in 8).

*Dose.*—2 to 4 ozs. three or four times daily.

(Not in other Pharmacopœias.)

INCOMPATIBLES.—Sulphate of Iron, Acetate of Lead, Nitrate of Silver, and Gelatine.

# UNGUENTA.

## OINTMENTS.

The following are the Ointments of the British Pharmacopœia, the formulas for which will be found under the names of the drugs from which they are prepared:—

| | | Proportion of active ingredients in the mass. |
|---|---|---|
| UNGUENTUM ACONITIÆ | | 1 in 60. |
| UNGUENTUM ANTIMONII TARTARATI | | 1 in 5. |
| UNGUENTUM ATROPIÆ | | 1 in 60. |
| UNGUENTUM BELLADONNÆ | (Extract) | 1 in 6½. |
| UNGUENTUM CADMII IODIDI | | 1 in 8. |
| UNGUENTUM CANTHARIDIS | | 1 in 8. |
| UNGUENTUM CETACEI | | 1 in 5. |
| UNGUENTUM CREASOTI | | 1 in 9. |
| UNGUENTUM ELEMI | | 1 in 5. |
| UNGUENTUM GALLÆ | | 1 in 6½. |
| UNGUENTUM GALLÆ CUM OPIO | (Opium) | 1 in 15. |
| UNGUENTUM HYDRARGYRI | (Mercury) | 1 in 2. |
| UNGUENTUM HYDRARGYRI AMMONIATI | | 1 in 8. |
| UNGUENTUM HYDRARGYRI COMPOSITUM | | 1 Mercury in 4½. |
| UNGUENTUM HYDRARGYRI IODIDI RUBRI | | 1 in 28. |
| UNGUENTUM HYDRARGYRI NITRATIS | (Mercury) | 1 in 15½. |
| UNGUENTUM HYDRARGYRI OXIDI RUBRI | | 1 in 8. |

| | | Proportion of active ingredients in the mass. |
|---|---|---|
| UNGUENTUM HYDRARGYRI SUBCHLORIDI | | 1 in 6½. |
| UNGUENTUM IODI | (Iodine) | 1 in 31. |
| UNGUENTUM PICIS LIQUIDÆ | | 5 in 7. |
| UNGUENTUM PLUMBI ACETATIS | | 1 in 37½. |
| UNGUENTUM PLUMBI CARBONATIS | | 1 in 8. |
| UNGUENTUM PLUMBI IODIDI | | 1 in 8. |
| UNGUENTUM PLUMBI SUBACETATIS COMPOSITUM | (Solution of Subacetate of Lead) | 1 in 5½. |
| UNGUENTUM POTASSÆ SULPHURATÆ | | 1 in 15½. |
| UNGUENTUM POTASSII IODIDI | nearly | 1 in 8¾. |
| UNGUENTUM RESINÆ | | 1 in 3½. |
| UNGUENTUM SABINÆ | nearly | 1 in 3. |
| UNGUENTUM SIMPLEX. | | |
| UNGUENTUM SULPHURIS | | 1 in 5. |
| UNGUENTUM SULPHURIS IODIDI | | 1 in 15½. |
| UNGUENTUM TEREBINTHINÆ | (Oil) | 1 in 2⅛. |
| UNGUENTUM VERATRIÆ | | 1 in 60. |
| UNGUENTUM ZINCI | | 1 in 6½. |

Ointments which are not official are enumerated in the Index.

## UVÆ URSI FOLIA.

BEARBERRY LEAVES.

The dried leaves of *Arctostaphylos Uva ursi*, from indigenous plants.

*Test.*—Leaves not dotted beneath, nor toothed on the margin.

(Austr.; Belg.; Fr. Busserole; Dan.; Ger.; Russ.; U.S.)

### *Medicinal Properties.*

Astringent and tonic, with a direct influence on the kidneys and urinary organs. Used in menorrhagia and diabetes, also in chronic dysentery.

*Dose.*—Of the powdered leaf, 10 to 30 grs.

### Preparation.

**INFUSUM UVÆ URSI.**

Bearberry Leaves, bruised, 1; boiling Distilled Water, 20: infuse two hours, and strain. =(1 in 20).

*Dose.*—1 to 2 oz.

In the 1864 Pharmacopœia the leaves were not ordered to be bruised; *when bruised*, the infusion is stronger, but a large deposit forms from the strained fluid.

(U.S. Decoctum 1 in 15; not in others.

**Incompatibles.**—Iron Salts, Lead Salts, Nitrate of Silver, Vegetable Alkaloids, Gelatine.

# UVÆ.

## RAISINS.

The ripe fruit of the Grape Vine, *Vitis vinifera*, dried in the sun or with artificial heat. Imported from Spain.

### *Medicinal Properties.*

Nutritious and demulcent. Principally used as a flavouring agent.

Contained in Tinct. Cardam. Comp., Tinct. Sennæ.

# VALERIANÆ RADIX.

## VALERIAN ROOT.

The root of *Valeriana officinalis*, indigenous and cultivated in Britain, collected in autumn and dried; that from wild plants growing on dry soil preferred.

### *Medicinal Properties.*

It is a nervous stimulant and antispasmodic. Useful in hysteria and nervous diseases; also in chorea and epilepsy; and as an adjunct to tonics.

*Dose.*—10 to 30 grs. of the powder.

(In all the Pharmacopœias.)

### Preparations.

**INFUSUM VALERIANÆ.**

Valerian Root, bruised, 120 grs.; boiling Distilled Water, 10 ozs.: infuse one hour, and strain. =(about 1 in 36).

*Dose.*—1 to 2 oz.

(U.S. 1 in 30; Fr. Tisane, 1 in 100; not in others.)

**TINCTURA VALERIANÆ.** Intense reddish-brown.

Valerian Root, bruised, 1; Proof Spirit, 8: macerate the Valerian forty-eight hours with 6 of the spirit, agitating occasionally; pack in a percolator, let it drain, pour on the remainder of the spirit; when it ceases to drop, press and filter, and add proof spirit to make up 8. =(1 in 8).

*Dose.*—1 to 2 drms.

(Austr. Belg. Dan. Fr. Ger. and Russ. 1 in 5; U.S. 1 in 7; all by weight.)

**TINCTURA VALERIANÆ AMMONIATA.** Intense reddish-brown.

Valerian Root, bruised, 1; Aromatic Spirit of Ammonia, 8: macerate the Valerian seven days, press, filter, and add Aromatic Spirit of Ammonia to make up 8. =(1 in 8).

*Dose.*—½ to 1 drm.

(Belg. with liquid Ammonia and Alcohol, 1 and 5½ by weight; U.S. 1 in 7½; not in others.)

Not Official.

TINCT. VALER. ÆTHEREA, Dan. and Ger.—Bruised Valerian 1, Spirit of Ether 5, by weight: macerate eight days.

# VAPORES.

## INHALATIONS.

VAPOR ACIDI HYDROCYANICI, 10 to 15 minims, and 1 drm. cold Water.

VAPOR CHLORI, Chlorinated Lime, 2 ozs.; cold Water, a sufficiency.

VAPOR CONIÆ, Extract of Hemlock, 60 grs.; Solution of Potash, 1 drm.; Water, 10 drms.: of this mixture use 20 minims and hot Water.

VAPOR CREASOTI, 12 minims, in 8 ozs. boiling Water.

VAPOR IODI, Tincture of Iodine, 1 drm.; Water, 1 oz.: apply a gentle heat.

Several kinds of Inhalers are in use; the Author has invented one made of Tin, having a mouthpiece which, at the same time that it allows the vapour to pass freely by the mouth, closes firmly the nostrils. Dr. Nelson's and Messrs. Maw's are made of Earthenware. Dr. Morell Mackenzie has invented one of a more elaborate description, which he calls Eclectic, fitted with a thermometer specially adapted for diseases of the throat.

Not Official.

# VASELINE.

*Syn.* COSMOLINE, GELATUM PETROLEI, SAXOLEUM SUSPISSATUM, UNG. PETROLEI.

A residuum after distillation of Petroleum, or Rock Oil, of a yellow colour. When treated with Animal Charcoal, white.

Solubility: freely in Ether, slightly in Alcohol, insoluble in water. Mixes in all proportions with Fixed and Volatile Oils; it also mixes with Glycerine, but separates on the addition of Water. It does not form Soap with Alkalies; neither Potash nor Hydrochloric Acid acts upon it. It seems indifferent to reagents, and is not changed or made rancid by exposure to air.

It is an admirable medium for ointments, for it does not change Iodides of the Metals, nor the Oxides of Mercury, nor Subacetate of Lead; Citrine Ointment made with it keeps without the beautiful lemon colour being affected by it, even when largely diluted with it. Litmus-paper is not acted upon by it.

It may be made of any consistence by the addition of Paraffin Wax, so as to be employed for Cerates and Ointments. Ointments for the eyes may be made with it.

# VERATRIA.

VERATRIA.

An alkaloid, obtained from Cevadilla, not quite pure.

Pale grey, amorphous, pulverulent masses, powerfully irritating the nostrils, strongly and persistently bitter, and highly acrid and poisonous. Concentrated Sulphuric Acid changes it first to yellow, then blood-red, and lastly violet.

Solubility: scarcely soluble in cold water; 1 in 1000 of boiling water; 1 in 11 of Rectified Spirit; 1 in 6 of Ether; and readily in diluted acids.

*Medicinal Properties.*

A powerful emetic and drastic purgative. Rarely given internally. Used externally in neuralgia, in chronic swellings, stiffening or induration of the joints. It should not be used where the skin is broken.

(In all the Pharmacopœias.)

### Preparation.

**UNGUENTUM VERATRIÆ.** Light fawn.

Veratria, 8 grs.; Prepared Lard, 1 oz.; Olive Oil, ½ drm.: rub the Veratria and the Oil together, then mix thoroughly with the Lard. =(1 in 60).

(U.S. 20 grs. to 1 oz. troy, or 1 in 24; Belg. 1 in 100; Russ. 1 in 90; not in others.)

# VERATRI VIRIDIS RADIX.

GREEN HELLEBORE ROOT.

The rhizome of *Veratrum viride,* collected in autumn in U.S. and Canada. Dried.

*Medicinal Properties.*

Emetic. It increases most of the secretions; diminishes the frequency of the pulse, and reduces the respirations; when freely taken, powerfully influences the nervous system, occasioning faintness and loss of power, with dilatation of the pupils. Best adapted to gout, rheumatism, and neuralgic affections; should be cautiously prescribed.

*Dose.*—4 to 6 grs. of the powder.

### Preparation.

**TINCTURA VERATRI VIRIDIS.** Deep brown.

Green Hellebore root, in coarse powder, 4; Rectified Spirit, 20: macerate the powder with 15 of the spirit forty-eight hours, agitating occasionally, pack it in a percolator, let it drain, pour on the remainder of the spirit; when it ceases to drop, press, filter, and add Rectified Spirit to make up 20. =(1 in 5).

*Dose.*—5 to 20 minims.

(U.S. American Hellebore, 16 troy ounces; Alcohol, *q.s.* to percolate 32 fl. ozs.; not in others.)

## VINA.

### WINES.

Medicated Wines are of very ancient date, and were admitted into our earliest Pharmacopœias. Two only remain as representatives of the old Pharmacopœias—Vinum Antimonii and V. Ferri; the former was prepared by digesting 4 ounces of the Regulus of Antimony in powder with 3 pounds of "White" Wine (Pharmacopœia Londinensis, 1655). The latter (Vinum Chalybeatum) was made with Rhenish Wine and iron filings.

The following are the Wines of the British Pharmacopœia, the formulas for which will be found under the names of the drugs from which they are prepared:—

| Dose. | | Proportion of active ingredient in the whole. |
|---|---|---|
| 1 drm. | VINUM ALOES | 1 in 26½. |
| 15 mins. | VINUM ANTIMONIALE | 2 grs. to 1 oz. |
| | VINUM AURANTII | British Orange Wine. |
| 20 mins. | VINUM COLCHICI | (Corm) 1 in 5. |
| 1 drm. | VINUM FERRI | made with Iron Wire. |
| 1 drm. | VINUM FERRI CITRATIS | 8 grs. to 1 oz. |
| 5 mins. | VINUM IPECACUANHÆ | 1 in 20. |
| 15 mins. | VINUM OPII | Ext. Opium 1 in 20. |
| ½ oz. | VINUM QUINIÆ | 1 gr. to 1 oz. |
| 1 drm. | VINUM RHEI | 33 grs. to 1 oz. |
| | VINUM XERICUM. | |

## VINUM XERICUM.

### SHERRY.

A pale brown Spanish Wine, containing about seventeen or eighteen per cent. of Alcohol. Unless good sound Sherry is used, the preparations are apt to spoil by keeping.

All Medicinal Wines are made with Sherry, except Vin. Ferri Citratis and Vinum Quiniæ, which are made with British orange wine.

For the amount of Alcohol in the several wines most commonly drunk in England, *see* "Spiritus."

Not Official.

## VINCA MAJOR.

GREAT PERIWINKLE.

**fusion made of 2 ozs. of dried herb to 20 ozs. boiling water, and strained when powerfully astringent.**

**—A wineglassful drunk as frequently as required will arrest menorrhagia her remedies have failed.**

**Vincæ Majoris Liquidum, made from the expressed juice of the plant of ength that 1½ drms. are equal to 2 ozs. of the infusion.**

**—1 to 2 drms. in water.**

**latter preparation keeps well, and is the best to prescribe.**

## ZINCUM.

ZINC.

Zn, eq. 65.

g. 7·1; fuses at 773° F. A bluish-white metal, of peculiar taste a perceptible smell when rubbed; laminated, and with a crys- fracture.
ccurs native, as a Sulphide or as a Carbonate, and is separated mpurities by sublimation.

## ZINCUM GRANULATUM.

GRANULATED ZINC.

Zinc of Commerce in an earthen crucible, heated to a suffi- legree to melt the Zinc, but not to produce combustion; pour very thin stream into a bucket of cold water; afterwards dry nc.
to prepare Liquor Zinci Chloridi, Zinci Chloridum, Zinci s.
British Pharmacopœia has continued the preparations of Zinc ere in former Pharmacopœias, viz.:—

ZINCI ACETAS.
ZINCI CARBONAS.
ZINCI CHLORIDUM.
ZINCI OXIDUM.
ZINCI SULPHAS.
ZINCI VALERIANAS.

**patibles of Zinc Salts are,—Alkalies and their Carbonates, Lime Water, of Lead, Nitrate of Silver, Astringent Vegetable Infusions or Decoctions, k.**

**otes.—In case of poisoning with the Salts of Zinc, Carbonate of Soda or te of Potash in large quantities dissolved in warm water, Milk and Eggs**

freely, Tannic Acid or Strong Tea, Laudanum, Linseed Meal Poultices to abdomen. If much pain in the abdomen, an enema of gruel, or starch and water may be given. (Murrell.)

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## ZINCI ACETAS.

ACETATE OF ZINC.

$Zn(C_2H_3O_2)_2.\ 2H_2O$, eq. 219.

Thin, translucent, and colourless crystalline plates, of pearly lustre.

Solubility, 10 in 25 of water.

*Tests.*—A dilute watery solution is not affected by Chloride of Barium or by Nitrate of Silver; and when slightly acidulated with Hydrochloric Acid is not precipitated by Sulphuretted Hydrogen—indicating absence of Lead. After it has been boiled for a few minutes with a little Nitric Acid, it yields with Ammonia a white precipitate, entirely soluble without colour in an excess of the reagent.

### *Medicinal Properties.*

Astringent. Similar to the Sulphate.

*Dose.*—1 to 2 grs. as a tonic, 10 to 20 grs. as an emetic.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Not Official.

Lotio.—Acetate of Zinc, 1 to 2 grs.; Water, 1 oz.: mix.

An astringent collyrium in ophthalmia, or as an injection in gonorrhœa after the acute stage has passed.

Tincture or Wine of Opium causes no precipitate with this Lotion.

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Not Official.

## ZINCI BROMIDUM.

A tonic.

*Dose.*—2 grs. three times a day.

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## ZINCI CARBONAS.

CARBONATE OF ZINC.

$(ZnCO_3ZnO)_2.\ 3H_2O$, eq. 341.

A white, tasteless, inodorous powder.

Insoluble in water.

*Tests.*—Its solution in diluted Nitric Acid is not precipitated by Chloride of Barium (indicating absence of sulphate), or Nitrate of Silver (absence of chloride), and gives with Carbonate of Ammonia a white precipitate (Carbonate of Zinc), entirely soluble without colour in an excess of the reagent.

### *Medicinal Properties.*

Same as those of the Oxide of Zinc.

*Dose.*—2 to 10 grs.

(U.S.; not in others.)

Not Official.

**Calamine.**—Impure Carbonate of Zinc, used for Lotions and for making Turner's Cerate.

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## ZINCI CHLORIDUM.

### CHLORIDE OF ZINC.

$ZnCl_2$, eq. 136.

In colourless opaque rods or tablets, very deliquescent and caustic.

Solubility, 10 in 4 of water; freely in Rectified Spirit and in Ether.

*Test.*—Its watery solution is not affected by Chloride of Barium (indicating absence of Sulphuric Acid), or by Oxalate of Ammonia (absence of Lime), and is not tinged blue by the Ferrocyanide or Ferridcyanide of Potassium (absence of Iron). Ammonia throws down a white precipitate entirely soluble in an excess of the reagent.

### *Medicinal Properties.*

Internally, a weak solution is alterative and tonic; externally, applied as a caustic to malignant sores, bleeding cancer, either mixed with an equal proportion of flour or alone, and as it liquefies, sprinkle with plaster of Paris to prevent its spreading, care being taken that it does not come in contact with the edges of the skin. 5 grs. to 1 oz. of water as a wash for the mouth.

*Dose.*—½ to 1 gr.

Solution for Gaiffe's galvanic apparatus, 1 drm. Chloride of Zinc to 2 ozs. of distilled water, and filtered.

(Austr. Ger. and Russ. Zincum Chloratum; Belg. Chloruretum Zinci; Dan. Chloretum Zincicum; Fr. Chlorure de Zinc; U.S. Zinci Chloridum).

### Preparation.

**LIQUOR ZINCI CHLORIDI.** Colourless.

Granulated Zinc, 8; Hydrochloric Acid, 22; Solution of Chlorine, *q. s.*; Carbonate of Zinc, ½; Distilled Water, 10. Mix the acid and water in a porcelain dish, add the Zinc, and apply a gentle heat to promote the action until gas is no longer evolved; boil for half an hour, supplying the water lost by evaporation, and allow the product to cool. Filter it into a bottle, and add solution of Chlorine by degrees, with frequent agitation, until the fluid acquires a permanent odour of Chlorine. Add the Carbonate of Zinc, in small quantities at a time, and with renewed agitation, until a brown sediment appears. Filter the liquid into a porcelain basin, and evaporate until it is reduced to the bulk of 20.

(Not in other Pharmacopœias.)

ANTIDOTES.—In case of poisoning with Chloride of Zinc, Carbonate of Soda, warm demulcent drinks (*vide* Zincum, page 327).

(Sir W. Burnett's Disinfecting Solution, sp. g. 2·000.)

Oxide of Zinc, mixed with an equal weight of Chloride of Zinc, will preserve the latter dry enough to blow through a tube into any cavity required, and may be so kept in a bottle for a long time.

CHLORIDE OF ZINC POINTS.—Chloride of Zinc, 1; Oxide of Zinc, 1; Wheat Flour, 2; Water to make a stiff paste, which is formed into caustic points for cancer.

Not Official.

## ZINCI OLEAS.

Oxide of Zinc, 1 oz.; Oleic Acid, 8 ozs.: stir together until thoroughly mixed, and after standing 2 hours, heat in a water-bath until dissolved.

Useful in acute and chronic eczema, chronic ulcers in the discharging state, by means of tissue paper dipped into it.

May be prescribed with Vaseline or Simple Ointment.

## ZINCI OXIDUM.

### OXIDE OF ZINC.

ZnO, eq. 81.

A soft, white, tasteless, and inodorous powder.

Insoluble in water.

*Tests.*—Dissolves without effervescence in diluted Nitric Acid, forming a solution which is not affected by Chloride of Barium (absence of sulphates) or Nitrate of Silver (absence of chlorides), and gives, with Carbonate of Ammonia, a white precipitate which dissolves entirely without colour in excess of the reagent.

### *Medicinal Properties.*

Internally as a tonic, especially in spasmodic affections. Astringent and absorbent, employed externally, in the form of powder or ointment, to slight excoriations and ulcerations.

*Dose.*—2 to 10 grs.

(In all the Pharmacopœias; Fr. by the dry as well as the humid process.)

Makes into pills with Conf. Rosæ Caninæ.

### Preparation.

**UNGUENTUM ZINCI.** Cream.

Oxide of Zinc, in very fine powder, 80 grs.; Benzoated Lard, 1 oz.: mix. Add the Oxide to the melted Lard, and stir till cool. =(1 in 6½).

(U.S. 1 in 6; Fr. Pommade, Belg. Dan. Ger. and Russ. 1 in 10; not in Austr.)

Applied to the feet once in twenty-four hours, prevents the unpleasant odour of perspiration.

Not Official.

**Lapis Tutiæ.**—Tutty, an impure Oxide of Zinc, used for eye lotions.

## ZINCI SULPHAS.

### SULPHATE OF ZINC.

$ZnSO_4 . 7H_2O$, eq. 287.

In colourless, transparent, prismatic crystals, with a strong metallic styptic taste.

Solubility, 10 in 7 of water. Insoluble in Rectified Spirit.

*Tests.*—Its watery solution is not tinged purple by Tincture of Galls—indicating absence of Iron; and when acidulated with Sulphuric or Hydrochloric Acid, gives no precipitate with Sulphuretted Hydrogen—indicating absence of Lead and Copper. After it has been boiled for a few minutes with a little Nitric Acid, it yields with Ammonia a white precipitate, which is entirely soluble without colour in an excess of the reagent.

*Medicinal Properties.*

In small doses tonic and astringent; chiefly employed in spasmodic diseases, as epilepsy, chorea, tussis, &c.; in large doses a prompt emetic, if the head be kept cold. As an astringent, chiefly externally; as an injection in fluor albus and in the advanced stages of gonorrhœa; and as a collyrium in ophthalmia, or a wash for indolent ulcers. It is also used as a styptic.

*Dose.*—As a tonic or astringent, 1 to 2 grs.; emetic, 10 to 30 grs.; an injection or Collyrium may be made with 1 to 3 grs. to an ounce of water.

(In all the Pharmacopœias; Austr. Ger. and Russ. Z. Sulphuricum; Belgi Sulphas Zinci; Dan. Sulphas Zincicus; Fr. Sulfate de Zinc; U.S. Zinc. Sulphas.)

Tincture or Wine of Opium causes no precipitate with Solutions of Zinc.

Not Official.

**Sticks of fused Sulphate of Zinc.**—Astringent, applied to suppurating surfaces.

## ZINCI VALERIANAS.

### VALERIANATE OF ZINC.

$Zn(C_5H_9O_2)_2$, eq. 267.

In bright white, pearly, tabular crystals, with a feeble odour of Valerianic Acid and a metallic taste.

Solubility, 1 in 120 of water; 1 in 60 of Rectified Spirit; 1 in 500 of Ether.

*Tests.*—Its solution in hot water is not precipitated by Chloride of Barium. It gives, when heated with diluted Sulphuric Acid, a distillate (Valerianic Acid), which, when mixed with the solution of Acetate of Copper, does not immediately affect the transparency of the fluid (indicating absence of Butyric Acid), but forms after a little time oily drops, which gradually pass into a bluish-white crystalline deposit—Valerianate of Copper.

*Medicinal Properties.*

Antispasmodic, chiefly used in chorea, epilepsy, and in various neuralgic and hysterical affections. As a topical astringent in chronic conjunctivitis, as a collyrium, 1 or 2 grains to 1 ounce of water.

*Dose.*—1 to 6 grs. or more, either in pill or solution.

(Belg. Fr. Ger. Russ. and U.S.; not in Austr. and Dan.)

INCOMPATIBLES.—All acids, soluble carbonates, most metallic salts, vegetable astringents.

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# ZINGIBER.

## GINGER.

The scraped and dried rhizome of *Zingiber officinale;* from plants cultivated in the West Indies, India, and other countries.

*Medicinal Properties.*

Aromatic, stimulant, and carminative. It is given in dyspepsia, flatulency, and as an adjunct to purgative medicines. Used as a gargle in cases of relaxed uvula and tonsils.

*Dose.*—In powder, 10 to 20 grs.

(In all the Pharmacopœias; Fr. Gingembre.)

Contained in Conf. Opii, Conf. Scammonii, Inf. Sennæ, Pil. Scillæ Comp., Pulv. Cinnam. Comp., Pulv. Jalapæ Comp., Pulv. Opii Comp., Pulv. Rhei Comp., Pulv. Scammonii Comp., Syrupus Rhamni, Vin. Aloes.

### Preparations.

**SYRUPUS ZINGIBERIS.** Straw colour; opaque; crystallizes much on keeping.

Strong Tincture of Ginger, 6 drms.; Syrup, 19 ozs.: mix. =(about 1 in 26).

*Dose.*—1 to 4 drms.

(U.S. with Fluid Extract; Belg. from root, 1 in 18; Russ. from root, 1 in 20; not in others.)

**TINCTURA ZINGIBERIS.** Pale reddish-brown.

Ginger, bruised, 1; Rectified Spirit, 8: macerate the Ginger forty-eight hours in 6 of the spirit, agitating occasionally; pack in a percolator, let it drain, pour on the remaining spirit, and when it ceases to drop, press, filter, and add Rectified spirit to make 8. =(1 in 8).

*Dose.*—10 to 30 mins.

(Belg. Fr. Ger. and Russ. 1 in 5; U.S. 1 in 3; all by weight; not in Austr. and Dan.)

**TINCTURA ZINGIBERIS FORTIOR.** Reddish-brown. *Syn.* ESSENTIA ZINGIBERIS.

Ginger, in powder, 10; Rectified Spirit, sufficient to percolate 20. Pack the Ginger tightly in a percolator, and pour over it carefully half of the Spirit, and after two hours add the remainder and as much more as is required to percolate 20. =(1 in 2).

*Dose.*—5 to 20 minims.

Contained in Syrup of Ginger = (1 in 26).

Not Official.

**OLEORESINA ZINGIBERIS.** U.S.

Ginger, in fine powder, 12; Stronger Ether, 12; Alcohol *q. s.* Press the ginger firmly in a percolator, pour on the Ether, and when that has been absorbed, add Alcohol until 12 ounces have slowly passed. Recover the Ether by distillation, and expose the residue until the Volatile part has evaporated.

# APPENDIX.

## I. ARTICLES EMPLOYED IN CHEMICAL TESTING.

**ALCOHOL.** ABSOLUTE ALCOHOL.

($C_2H_6O$.)

Take of Rectified Spirit, 20 fluid ozs.; Carbonate of Potash, 1½ oz.; Slaked Lime, 10 ozs.: put the Carbonate of Potash and Spirit into a stoppered bottle, and allow them to remain in contact for two days, frequently shaking the bottle. Expose the Slaked Lime to a red heat in a covered crucible for half an hour, then remove it from the fire, and, when it has cooled, immediately put the Lime into a flask or retort, and add to it the Spirit from which the denser aqueous solution of Carbonate of Potash, which will have formed a distinct stratum at the bottom of the bottle, has been carefully and completely separated. Attach a condenser to the apparatus, and allow it to remain without any external application of heat for twenty-four hours; then applying a gentle heat, let the Spirit distil until that which has passed over shall measure 1½ fl. oz.; reject this and continue the distillation into a fresh receiver until nothing more passes at a temperature of 200° F.

*Characters and Tests.*—Colourless and free from empyreumatic odour. Specific gravity 0·795. It is entirely volatilized by heat, is not rendered turbid when mixed with water, and does not cause anhydrous Sulphate of Copper to assume a blue colour when left in contact with it—indicating absence of water.

**BENZOL.**

($C_6H_6$.)

A colourless volatile liquid, obtained from coal tar. Specific gravity 0·85.

**BORACIC ACID.**

($H_3BO_3$.)

*Test.*—Soluble in Alcohol. The solution burns with a green flame.

**CHLORIDE OF BARIUM.**

($BaCl_2 . 2H_2O$.)

**COPPER FOIL.**

Pure Metallic Copper, thin and bright.

**GOLD, FINE.**

Gold, free from metallic impurities.

HYPOSULPHITE OF SODA.

($Na_2H_2S_2O_4 . 4H_2O$.)

*Test.*—24·8 grains decolorize 1000 grain-measures of the volumetric solution of Iodine.

INDIGO.

($C_8H_5NO$.)

A blue pigment prepared from various species of *Indigofera*, Linn.

ISINGLASS.

The swimming-bladder or sound of various species of *Acipenser*, Linn., prepared and cut into fine shreds.

LITMUS.

A blue pigment prepared from various species of *Rocella*, DC.

LITMUS PAPER, BLUE.

Unsized white paper steeped in Tincture of Litmus, and dried by exposure to the air.

LITMUS PAPER, RED.

Unsized white paper steeped in Tincture of Litmus which has been previously reddened by the addition of a very minute quantity of Sulphuric Acid, and dried by exposure to the air.

LITMUS TINCTURE.

Take of Litmus, in powder, 1 oz.; Proof Spirit, 10 fl. ozs.: macerate for two days in closed vessel, and filter.

OXALIC ACID OF COMMERCE.

OXALIC ACID, PURIFIED.

($H_2C_2O_4 . 2H_2O$.)

Take of Oxalic Acid of Commerce, 1 pound; boiling Distilled Water, 30 fl. ozs.: dissolve, filter the solution, and set it aside to crystallize. Pour off the liquor, and dry the crystals by exposure to the air on filtering-paper placed on porous bricks.

*Test.*—It is entirely dissipated by a heat below 350° F.

OXALATE OF AMMONIA.

( $(NH_4)_2C_2O_4 . H_2O$.)

Take of Purified Oxalic Acid, 1 oz.; boiling Distilled Water, 8 fl. ozs. Carbonate of Ammonia, a sufficiency: dissolve the Oxalic Acid in the Water, neutralize the solution at a boiling temperature, filter it while still hot, and set it by that crystals may form as it cools.

PLASTER OF PARIS.

Native Sulphate of Lime, $CaSO_4 . 2H_2O$, deprived of water by heat.

PLATINUM BLACK.

Platinum in a state of minute division, obtained by adding excess of Carbonate of Soda and some Sugar to solution of Perchloride of Platinum, and boiling till a black precipitate is formed, which is washed and dried.

PLATINUM FOIL.

RED PRUSSIATE OF POTASH.

($K_6Fe_2C_{12}N_{12}$.)

*Test.*—Its solution in water gives no precipitate with Persulphate of Iron.

### SUBACETATE OF COPPER OF COMMERCE.

Verdigris.

### SULPHATE OF COPPER, ANHYDROUS.

($CuSO_4$.)

Sulphate of Copper deprived of its water by a heat of 400° F.

*Characters.* — A yellowish-white powder, which becomes blue when moistened with water.

### SULPHIDE OF IRON.

($FeS$.)

Produced by applying the end of a rod of iron, heated to a white heat at a blacksmith's forge, to the end of a roll of Sulphur, and allowing the Sulphide of Iron, as it is formed, to run into a vessel of water.

### SULPHURETTED HYDROGEN.

($H_2S$.)

Take of Sulphide of Iron, ½ oz.; Water 4 fl. ozs.; Sulphuric Acid, a sufficiency: place the Sulphide of Iron and the Water in a gas-bottle closed with a cork perforated by two holes, through one of which passes air-tight a funnel tube of sufficient length to dip into the water, and through the other a tube for giving exit to the gas. Through the former pour from time to time a little of the Acid, so as to develop the Sulphuretted Hydrogen as it may be required.

### TIN, GRANULATED.

Grain tin, reduced to small fragments by fusing and pouring it into cold water.

### TURMERIC.

The Rhizome of *Curcuma longa*, Linn.

### TURMERIC PAPER.

Unsized white paper steeped in Tincture of Turmeric, and dried by exposure to the air.

### TURMERIC TINCTURE.

Take of Turmeric, bruised, 1 oz.; Rectified Spirit, 6 fl. ozs.: macerate for seven days in a closed vessel, and filter.

## II. TEST SOLUTIONS.

### SOLUTION OF ACETATE OF COPPER.

Take of Subacetate of Copper of Commerce, in fine powder, ½ oz.; Acetic Acid, 1 fl. oz.; Distilled Water, a sufficiency: dilute the Acid with ½ fl. oz. of the Water; digest the Subacetate of Copper in the mixture, at a temperature not exceeding 212° F., with repeated stirring, and continue the heat until a dry residue is obtained. Digest this in 4 ozs. of boiling Distilled Water, and by the addition of more of the Water make up the solution to 5 fl. ozs. Filter it.

### SOLUTION OF ACETATE OF POTASH.

Take of Acetate of Potash, ½ oz.; Distilled Water, 5 fl. ozs.: dissolve and filter.

### SOLUTION OF ACETATE OF SODA.

Take of Acetate of Soda, ¼ oz.; Distilled Water, 5 fl. ozs.: dissolve and filter.

### SOLUTION OF ALBUMEN.

Take the White of one Egg; Distilled Water, 4 fl. ozs.: mix by trituration in a mortar, and filter through clean tow first moistened with distilled water. This solution must be recently prepared.

### SOLUTION OF AMMONIO-NITRATE OF SILVER.

Take of Nitrate of Silver, in crystals, ¼ oz.; Solution of Ammonia, ½ fl. oz., or a sufficiency; Distilled Water, a sufficiency: dissolve the Nitrate of Silver in 8 fl. ozs. of Water, and to the solution add the Ammonia until the precipitate first formed is nearly dissolved. Clear the solution by filtration, and then add Distilled Water, so that the bulk may be 10 fl. ozs.

### SOLUTION OF AMMONIO-SULPHATE OF COPPER.

Take of Sulphate of Copper, in crystals, ½ oz.; Solution of Ammonia, a sufficiency; Distilled Water, a sufficiency: dissolve the Sulphate of Copper in 8 fl. ozs. of water, and to the solution add the Ammonia until the precipitate first formed is nearly dissolved. Clear the solution by filtration, and then add Distilled Water, so that the bulk may be 10 fl. ozs.

### SOLUTION OF AMMONIO-SULPHATE OF MAGNESIA.

Take of Sulphate of Magnesia, 1 oz.; Chloride of Ammonium, ½ oz.; Solution of Ammonia, ½ fl. oz.; Distilled Water, a sufficiency: dissolve the Sulphate of Magnesia and Chloride of Ammonium in 8 fl. ozs. of the water, and to the solution add the Ammonia, and as much Distilled Water as will make up the bulk to 10 fl. ozs. Filter it.

### SOLUTION OF BORACIC ACID.

Take of Boracic Acid, 50 grs.; Rectified Spirit, 1 fl. oz.: dissolve and filter.

### SOLUTION OF BROMINE.

Take of Bromine, 10 minims; Distilled Water, 5 fl. ozs: place the Bromine in a bottle furnished with a well-fitting stopper, pour on the water, and shake several times. Keep it excluded from the light.

### SOLUTION OF CARBONATE OF AMMONIA.

Take of Carbonate of Ammonia, in small pieces, ½ oz.; Distilled Water, 10 fl. ozs.: dissolve and filter.

### SOLUTION OF CHLORIDE OF AMMONIUM.

Take of Chloride of Ammonium, 1 oz.; Distilled Water, 10 fl. ozs.: dissolve and filter.

### SOLUTION OF CHLORIDE OF BARIUM.

Take of Chloride of Barium, in crystals, 1 oz.; Distilled Water, 10 fl. ozs.: dissolve and filter

### SOLUTION OF CHLORIDE OF CALCIUM.

Take of Chloride of Calcium, 1 oz.; Distilled Water, 10 fl. ozs.: dissolve and filter.

### SOLUTION (SATURATED) OF CHLORIDE OF CALCIUM.

Take of Chloride of Calcium, 4 ozs.; Distilled Water, 5 fl. ozs.: dissolve and filter.

## SOLUTION OF CHLORIDE OF GOLD.

Take of Fine Gold, reduced by a rolling machine to a thin lamina, 60 grs.; Nitric Acid, 1½ fl. oz.; Hydrochloric Acid, 7 fl. ozs.; Distilled Water, a sufficiency: place the Gold in a flask with the Nitric Acid and 6 fl. ozs. of the Hydrochloric Acid, first mixed with 4 fl. ozs. of the water, and digest until it is dissolved. Add to the solution the additional fluid ounce of Hydrochloric Acid, evaporate at a heat not exceeding 212° until acid vapours cease to be given off, and dissolve the Chloride of Gold thus obtained in 5 fl. ozs. of Distilled Water. The solution should be kept in a stoppered bottle.

## SOLUTION OF CHLORIDE OF TIN.

Take of Granulated Tin, 1 oz.; Hydrochloric Acid, 3 fl. ozs.; Distilled Water, a sufficiency: dilute the Acid in a flask with 1 fl. oz. of the water, and, having added the Tin, apply a moderate heat until gas ceases to be evolved. Add as much of the water as will make up the bulk to 5 fl. ozs., and transfer the solution, together with the undissolved Tin, to a bottle with an accurately ground stopper.

## SOLUTION OF GELATINE.

Take of Isinglass, in shreds, 50 grs.; Warm Distilled Water, 5 fl. ozs.: mix and digest for half an hour on a water bath with repeated shaking, and filter through clean tow moistened with distilled water.

## SOLUTION OF IODATE OF POTASH.

Take of Iodine, 50 grs.; Chlorate of Potash, 50 grs.; Nitric Acid, 8 minims; Distilled Water, 10½ fl. ozs.: rub the Iodine and Chlorate of Potash together to a fine powder; place the mixture in a Florence flask, and having poured upon it half an ounce of the water acidulated with the Nitric Acid, digest at a gentle heat until the colour of the Iodine disappears. Boil for one minute; then transfer the contents of the flask to a capsule, and evaporate to perfect dryness at 212° F. Finally dissolve the residue in the remaining 10 ozs. of Distilled Water; filter the solution, and keep it in a stoppered bottle.

## SOLUTION OF IODIDE OF POTASSIUM.

Take of Iodide of Potassium, 1 oz.; Distilled Water, 10 fl. ozs.: dissolve and filter.

## SOLUTION OF OXALATE OF AMMONIA.

Take of Oxalate of Ammonia, ½ oz.; Warm Distilled Water, 20 fl. ozs.: dissolve and filter.

## SOLUTION OF PERCHLORIDE OF PLATINUM.

Take of Thin Platinum Foil, ¼ oz.; Nitric Acid, a sufficiency; Hydrochloric Acid, a sufficiency; Distilled Water, 7 fl. ozs.: mix 1 fl. oz. of the Nitric Acid with 4 fl. ozs. of the Hydrochloric Acid, and 2 fl. ozs. of the water; pour the mixture into a small flask containing the Platinum, and digest at a gentle heat, adding more of the acids mixed in the same proportion, should this be necessary, until the metal is dissolved. Transfer the solution to a porcelain dish, add to it 1 fl. drm. of Hydrochloric Acid, and evaporate on a water bath until acid vapours cease to be given off. Let the residue be dissolved in the remaining 5 ozs. of Distilled Water. Filter, and preserve it in a stoppered bottle.

## SOLUTION OF PHOSPHATE OF SODA.

Take of Phosphate of Soda, in crystals, 1 oz.; Distilled Water, 10 fl. ozs.: dissolve and filter.

### SOLUTION OF RED PRUSSIATE OF POTASH.

Take of Red Prussiate of Potash, in crystals, ¼ oz.: Distilled Water 5 fl. ozs.: dissolve and filter.

### SOLUTION OF SULPHATE OF INDIGO.

Take of Indigo, dry, and in fine powder, 5 grs.; Sulphuric Acid, 10 fl. ozs.: mix the Indigo in 1 fl. drm. of the Sulphuric Acid in a small test-tube, and apply the heat of a water bath for an hour. Pour the blue liquid into the remainder of the acid, agitate the mixture, and when the undissolved Indigo has subsided, decant the clear liquid into a stoppered bottle.

### SOLUTION OF SULPHATE OF IRON.

Take of Granulated Sulphate of Iron, 10 grs.; Boiling Distilled Water, 1 fl. oz.: dissolve and filter. The solution should be recently prepared.

### SOLUTION OF SULPHATE OF LIME.

Take of Plaster of Paris, ¼ oz.; Distilled Water, 1 pint: rub the Plaster of Paris in a porcelain mortar, for a few minutes, with 2 ozs. of the Water, introduce the mixture thus obtained into a pint bottle containing the rest of the Water, shake well several times, and allow the undissolved Sulphate to subside. When this has occurred, filter.

### SOLUTION OF SULPHIDE OF AMMONIUM.

Take of Solution of Ammonia, 5 fl. ozs.: put 3 fl. ozs. of the Ammonia into a bottle, and conduct into this a stream of Sulphuretted Hydrogen so long as the gas continues to be absorbed; then add the remainder of the Ammonia, and transfer the solution to a green-glass bottle furnished with a well-ground stopper.

### SOLUTION OF TARTARIC ACID.

Take of Tartaric Acid, in crystals, 1 oz.; Distilled Water, 8 fl. ozs.; Rectified Spirit, 2 fl. ozs.: dissolve the Tartaric Acid in the Water, add the Rectified Spirit, and preserve the solution in a stoppered bottle.

### SOLUTION OF YELLOW PRUSSIATE OF POTASH.

Take of Yellow Prussiate of Potash, in crystals, ¼ oz.; Distilled Water, 5 fl. ozs.: dissolve and filter.

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## III. TEST SOLUTIONS FOR VOLUMETRIC ESTIMATIONS.

The processes for volumetric estimations may be performed either with British or with metrical weights and measures, and the solutions are so arranged that they will be of the same strength, and the same indications will be obtained in using them, whichever system is employed, without the *necessity* of altering any of the figures by which the quantities of the substances tested, or of the test solutions required in the process, are expressed.

According to the British system, the quantities of the substances to be tested are expressed in grains by weight, whilst the quantities of the test solutions employed in testing are expressed in grain-measures,—the grain-measure being the volume of a grain of Distilled Water.

According to the metrical system, the quantities of the substances to be tested are expressed in grammes by weight, whilst the quantities of the test solutions employed in testing are expressed in cubic centimetres,—the cubic centimetre being the volume of a gramme of Distilled Water.

As the cubic centimetre bears the same relation to the gramme that the grain-measure bears to the grain, the one system may be substituted for the other with no difference in the results, excepting that, by the metrical system, all the quantities will be expressed in relation to a weight (the gramme) which is fifteen times greater than the British grain.

In practice it will be found convenient, in substituting metrical for British weights and measures, to reduce the values of all the numbers to one-tenth, by moving the decimal points, and this has been done in the tables appended to the descriptions of the volumetric solutions. The quantities indicated in the Pharmacopœia, which in grains and grain-measures can be conveniently used, would be found inconveniently large if the same numbers of grammes and cubic centimetres were employed.

The following apparatus is required in the preparation and use of these solutions.

For British weights and measures:—

1. A flask which, when filled to a mark on the neck, contains exactly 10,000 grains of Distilled Water at 60° F. The capacity of the flask is therefore 10,000 grain-measures.

2. A graduated cylindrical jar which, when filled to 0, holds 10,000 grains of Distilled Water, and is divided into 100 equal parts.

3. A burette. A graduated glass tube which, when filled to 0, holds 1000 grains of Distilled Water, and is divided into 100 equal parts. Each part therefore corresponds to 10 grain-measures.

For metrical weights and measures:—

1. A glass flask which, when filled to a mark on the neck, contains one litre or 1000 cubic centimetres.

2. A graduated cylindrical jar which, when filled to 0, contains one litre (1000 cubic centimetres), and is divided into 100 equal parts.

3. A burette. A graduated tube which, when filled to 0, holds one litre (1000 cubic centimetres), and is divided into 100 equal parts.

(One cubic centimetre is the volume of one gramme of Distilled Water at 4° C=39·28° Fahr.* 1000 cubic centimetres equal one litre.)

Volumetric solutions, before being used, should be shaken in order that they may be throughout of uniform strength. They should also be preserved in stoppered bottles. All measurements should be made at 60° Fahr.

## VOLUMETRIC SOLUTION OF BICHROMATE OF POTASH.

(Bichromate of Potash, $K_2Cr_2O_7$=295.)

Take of Bichromate of Potash, 147·5 grs.; Distilled Water, a sufficiency: put the Bichromate of Potash into the 10,000-grain flask, and, having half filled the flask with water, allow the salt to dissolve; then dilute the solution with more water, until it has the exact bulk of 10,000 grain-measures. 1000 grain-measures of this solution contain $\frac{1}{20}$th of an equivalent in grains (=14·75 grains) of Bichromate of Potash, and, when added to a solution of Protosalt of Iron, acidulated with Hydrochloric Acid, are capable of converting $\frac{1}{20}$th of six equivalents of Iron (=16·8 grains) from the state of Protosalt to that of Persalt.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. Thus 14·75 grammes of Bichromate of Potash should be made to form 1000 cubic centimetres of solution. 100 cubic centimetres of this solution contain $\frac{1}{200}$th of an equivalent in grammes of the Bichromate of Potash (=1·475 grammes), and are capable of converting $\frac{1}{200}$th of six equivalents of iron (1·68 grammes) from the state of Protosalt to that of Persalt.

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* It is customary to make the measurements with metrical apparatus at 60° Fahr.

This solution is used for determining the proportion of Protoxide of Iron in the following preparations. It is known that the whole of the Protosalt has been converted into a Persalt when a minute drop of the liquid, placed in contact with a drop of the solution of Red Prussiate of Potash on a white place, ceases to strike with it a blue colour.

| | British Weights and Measures. | | | | Metrical Weights and Measures. | | |
|---|---|---|---|---|---|---|---|
| | Grains weight of Substance. | = | Grain-measure of Vol. Sol. | or | Grammes weight of Substance. | = | C. C. of Vol. Sol. |
| Ferri Arsenias . . . | 20 | = | 170 | or | 2·0 | = | 17·0 |
| ,, Carb. Sacch. . | 20 | = | 330 | or | 2·0 | = | 33·0 |
| ,, Oxid. Magn. . | 20 | = | 83 | or | 2·0 | = | 8·3 |
| ,, Phosphas . . . | 20 | = | 250 | or | 2·0 | = | 25·0 |

## VOLUMETRIC SOLUTION OF HYPOSULPHITE OF SODA.

(Hyposulphite of Soda Crystallized, $Na_2H_2S_2O_4 \cdot 4H_2O = 248$.)

Take of Hyposulphite of Soda, in crystals, 280 grs.; Distilled Water, a sufficiency: dissolve the Hyposulphite of Soda in 10,000 grain-measures of water. Fill a burette with this solution, and drop it cautiously into 1000 grain-measures of the Volumetric Solution of Iodine, until the brown colour is just discharged. Note the number of grain-measures ($n$) required to produce this effect; then put 8000 grain-measures of the same solution into a graduated jar, and augment this quantity by the addition of Distilled Water, until it amounts to $\frac{8000 \times 1000}{n}$ grain-measures. If, for example, $n = 950$, the 8000 grain-measures should be diluted to the bulk of $\frac{8000 \times 1000}{950} = 8421$ grain-measures. 1000 grain-measures of this solution contain $\frac{1}{10}$th of an equivalent in grains = 24·8 grains of the Hyposulphite, and therefore correspond to $\frac{1}{10}$th of an equivalent in grains = 12·7 grains of Iodine.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. 100 cubic centimetres of this solution contain $\frac{1}{100}$th of an equivalent of Hyposulphite in grammes (= 2·48 grammes), and therefore correspond to $\frac{1}{100}$th of an equivalent in grammes (1·27 grammes) of Iodine.

The solution is used for testing the following substances. In each case, excepting that of Iodine, a solution of Iodide of Potassium and Hydrochloric Acid is added to the substance, and the amount of Iodine so liberated is indicated by this solution.

| | British Weights and Measures. | | | | Metrical Weights and Measures. | | |
|---|---|---|---|---|---|---|---|
| | Grains weight of Substance. | = | Grain-measures of Vol. Sol. | or | Grammes weight of Substance. | = | C. C. of Vol. Sol. |
| Calx Chlorata . . | 10·0 | = | 850 | or | 1·00 | = | 85·0 |
| Iodum . . . . . | 12·7 | = | 1000 | or | 1·27 | = | 100·0 |
| Liq. Calc. Chloratæ | 60·0 | = | 500 | or | 6·00 | = | 50·0 |
| ,, Chlori . . . | 439·0 | = | 750 | or | 43·90 | = | 75·0 |
| ,, Sodæ Chloratæ | 70·0 | = | 500 | or | 7·00 | = | 50·0 |

## VOLUMETRIC SOLUTION OF IODINE.

(Iodine, $I = 127$.)

Take of Iodine, 127 grains; Iodide of Potassium, 180 grains; Distilled Water, a sufficiency: put the Iodide of Potassium and the Iodine into the 10,000-grain flask, fill the flask to about two-thirds its bulk with Distilled Water, gently agitate until solution is complete, and then dilute the solution with more water until it has the exact bulk of 10,000 grain-measures. 1000 grain-measures of this solution contain $\frac{1}{10}$th of an equivalent in grains (12·7 grains) of Iodine, and therefore correspond to 1·7 grains of Sulphuretted Hydrogen, 3·2 grains of Sulphurous, and 4·95 grains of Arsenious Acid.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. 100 cubic centimetres contain 1·27 grammes of Iodine, and correspond to 0·17 gramme of Sulphuretted Hydrogen, 0·32 gramme of Sulphurous, and 0·495 gramme of Arsenious Acid.

This solution is used for testing the following substances. It is dropped from the burette into the liquid to be tested until free Iodine begins to appear in the solution.

| | British Weights and Measures. | | | | Metrical Weights and Measures. | | |
|---|---|---|---|---|---|---|---|
| | Grains weight of Substance. | = | Grain-measures of Vol. Sol. | or | Grammes weight of Substance. | = | C. C. of Vol. Sol. |
| Acid. Arseniosum . . | 4·0 | = | 808 | or | 0·40 | = | 80·8 |
| ,, Sulphurosum . . | 34·7 | = | 1000 | or | 3·47 | = | 100·0 |
| Liquor Arsenicalis . . | 441·5 | = | 808 | or | 44·15 | = | 80·8 |
| ,, Arsenici Hydrochloricus | 441·5 | = | 810 | or | 44·15 | = | 81·0 |

## VOLUMETRIC SOLUTION OF NITRATE OF SILVER.

(Nitrate of Silver, $AgNO_3 = 170$.)

Take of Nitrate of Silver, 170 grs.; Distilled Water, a sufficiency: put the Nitrate of Silver into the 10,000-grain flask, and, having half filled the flask with water, allow the salt to dissolve; then dilute the solution with more water until it has the exact bulk of 10,000 grain-measures. The solution should be kept in an opaque stoppered bottle. 1000 grain-measures of this solution contain $\frac{1}{10}$th of an equivalent in grains (17 grains) of Nitrate of Silver.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken 100 cubic centimetres contain $\frac{1}{100}$th of an equivalent in grammes (1·7 grammes) of Nitrate of Silver.

It is used in testing the following substances:—

| | British Weights and Measures. | | | | Metrical Weights and Measures. | | |
|---|---|---|---|---|---|---|---|
| | Grains weight of Substance. | = | Grain-measures of Vol. Sol. | or | Grammes weight of Substance. | = | C. C. of Vol. Sol. |
| Acid. Hydrocyan. . . | 270 | = | 1000 | or | 27·0 | = | 100·0 |
| Potass. Bromid. . . | 10 | = | 840 | or | 1·0 | = | 84·0 |
| Sodæ Arsenias (dry) . | 10 | = | 1613 | or | 1·0 | = | 161·3 |

## VOLUMETRIC SOLUTION OF OXALIC ACID.

(Crystallized Oxalic Acid, $H_2C_2O_4 . 2H_2O = 126$.)

Take of Purified Oxalic Acid, in crystals, quite dry, but not effloresced, 630 grs.; Distilled Water, a sufficiency: put the Oxalic Acid into the 10,000-grain flask, fill the flask to about two-thirds of its bulk with water, allow the acid to dissolve, and then dilute the solution with more water until it has the exact bulk of 10,000 grain-measures. 1000 grain-measures of this solution contain half an equivalent in grains (=63 grains) of Oxalic Acid, and are therefore capable of neutralizing one equivalent in grains of any alkali or alkaline carbonate.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. 100 cubic centimetres contain $\frac{1}{20}$th of an equivalent in grammes (=6·3 grammes) of Oxalic Acid, and will neutralize $\frac{1}{10}$th of an equivalent in grammes of an alkali.

The following substances are tested with this solution:—

| | British Weights and Measures. | | | | Metrical Weights and Measures. | | |
|---|---|---|---|---|---|---|---|
| | Grains weight of Substance. | = | Grain-measures of Vol. Sol. | or | Grammes weight of Substance. | = | C. C. of Vol. Sol. |
| Ammoniæ Carb. . . | 59·0 | = | 1000 | or | 5·90 | = | 100·0 |
| Borax . . . . . . | 191·0 | = | 1000 | or | 19·10 | = | 100·0 |
| Liq. Ammon. . . . | 85·0 | = | 500 | or | 8·50 | = | 50·0 |
| ,, ,, Fort. . | 52·3 | = | 1000 | or | 5·23 | = | 100·0 |
| ,, Calcis . . . . | 4380·0 | = | 200 | or | 438·00 | = | 20·0 |
| ,, ,, Sacchar. . | 460·2 | = | 254 | or | 46·02 | = | 25·4 |
| ,, Plumbi Subacet. . | 413·3 | = | 810 | or | 41·33 | = | 81·0 |
| ,, Potassæ . . . . | 462·9 | = | 482 | or | 46·29 | = | 48·2 |
| ,, ,, Efferves. . | 4380·0 | = | 150 | or | 438·00 | = | 15·0 |
| ,, Sodæ . . . . . | 458·0 | = | 470 | or | 45·80 | = | 47·0 |
| ,, ,, Efferves. . | 4380·0 | = | 178 | or | 438·00 | = | 17·8 |
| Plumbi Acetas . . . | 38·0 | = | 200 | or | 3·80 | = | 20·0 |
| Potassa Caustica . . | 56·0 | = | 900 | or | 5·60 | = | 90·0 |
| Potassæ Bicarb. . . | 50·0 | = | 500 | or | 5·00 | = | 50·0 |
| ,, Carb. . . . | 83·0 | = | 980 | or | 8·30 | = | 98·0 |
| ,, Citras . . . | 102·0 | = | 1000 | or | 10·20 | = | 100·0 |
| ,, Tartras . . . | 113·0 | = | 1000 | or | 11·30 | = | 100·0 |
| ,, ,, Acida . | 188·0 | = | 1000 | or | 18·80 | = | 100·0 |
| Soda Caustica . . . | 40·0 | = | 900 | or | 4·00 | = | 90·0 |
| ,, Tartarata . . . | 141·0 | = | 1000 | or | 14·10 | = | 100·0 |
| Sodæ Bicarb. . . . | 84·0 | = | 1000 | or | 8·40 | = | 100·0 |
| ,, Carb. . . . . | 143·0 | = | 960 | or | 14·30 | = | 96·0 |

## VOLUMETRIC SOLUTION OF SODA.

(Hydrate of Soda, $NaHO = 40$.)

Take of Solution of Soda, a sufficiency; Distilled Water, a sufficiency: fill a burette with the Solution of Soda, and cautiously drop this into 63 grs. of Purified Oxalic Acid dissolved in about 2 ozs. of water, until the acid is exactly neutralized as indicated by litmus. Note the number of grain-measures ($n$) of the solution used, and, having then introduced 9000 grain-measures of the Solution of Soda into a graduated jar, augment this quantity by the addition of water, until it becomes $\frac{9000 \times 1000}{n}$ grain-measures. If, for example, $n = 930$, the 9000 grain-measures should be augmented to

$\frac{9000 \times 1000}{930} = 9677$ grain-measures. 1000 grain-measures of this solution contain one equivalent in grains (40 grains) of Hydrate of Soda, and will therefore neutralize one equivalent in grains of any monobasic acid.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. 100 cubic centimetres contain $\frac{1}{10}$th equivalent in grammes (4 grammes) of Hydrate of Soda, and will neutralize $\frac{1}{10}$th of an equivalent in grammes of an acid.

This solution is used for testing the following substances:—

| | British Weights and Measures. | | | | Metrical Weights and Measures. | | |
|---|---|---|---|---|---|---|---|
| | Grains weight of Substance. | = | Grain-measures of Vol. Sol. | or | Grammes weight of Substance. | = | C. C. of Vol. Sol. |
| Acetum . . . . . | 445·4 | = | 402 | or | 44·54 | = | 40·2 |
| Acid. Acet. . . . . | 182·0 | = | 1000 | or | 18·20 | = | 100·0 |
| ,, ,, Dil. . . . | 440·0 | = | 313 | or | 44·00 | = | 31·3 |
| ,, ,, Glac. . . | 60·0 | = | 990 | or | 6·00 | = | 99·0 |
| ,, Citric. . . . . | 70·0 | = | 1000 | or | 7·00 | = | 100·0 |
| ,, Hydrochl. . . . | 114·8 | = | 1000 | or | 11·48 | = | 100·0 |
| ,, ,, Dil. . | 345·0 | = | 1000 | or | 34·50 | = | 100·0 |
| ,, Nitric. . . . . | 90·0 | = | 1000 | or | 9·00 | = | 100·0 |
| ,, ,, Dil. . . . | 361·3 | = | 1000 | or | 36·13 | = | 100·0 |
| ,, Nit. Hydrochl. Dil. | 352·4 | = | 920 | or | 35·24 | = | 92·0 |
| ,, Sulph. . . . . | 50·6 | = | 1000 | or | 5·06 | = | 100·0 |
| ,, ,, Arom. . . | 304·2 | = | 830 | or | 30·42 | = | 83·0 |
| ,, ,, Dil. . . . | 359·0 | = | 1000 | or | 35·90 | = | 100·0 |
| ,, Tartaricum . . . | 75·0 | = | 1000 | or | 7·50 | = | 100·0 |

### Not Official.

## GRANULATED PREPARATIONS.

MADE IN THE MANNER DIRECTED IN THE BRITISH PHARMACOPŒIA FOR PREPARING SODÆ CITRO-TARTRAS EFFERVESCENS.

The following is the quantity usually contained in 60 grains = an ordinary teaspoonful, which is considered a commencing dose:—

Bromide of Ammonium, 2 grs.
„ „ Potassium, 2 grs.
„ „ Sodium, 2 grs.
Carbonate of Bismuth, 2 grs.
„ „ Iron, 2 grs.
„ „ Lithia, 2 grs.
Citrate of Iron, 3 grs.
„ „ „ and Quinine, 3 grs.
„ „ Cinchonine, 2 grs.
Citrate of Quinine, 1 gr.
Hypophosphite of Lime, 2 grs.
Iodide of Iron, 1 gr.
„ „ Potassium, 2 grs.
„ „ Sodium, 2 grs.
Nitrate of Cerium, 1 gr.
„ „ Potash, 5 grs.
Phosphate of Iron, 1 gr.

The several imitations in a granular effervescent form of the following Mineral Waters, the dose being a large teaspoonful:—

Carlsbad.
Cheltenham.
Fachingen.
Kissingen.
Marienbad.
Pullna.
Selters.
Vichy.

Also for Gingerade and Lemonade.

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## SUPPOSITORIA.

## SUPPOSITORIES.

### Official.

**Acidi Carbolici c. Sapone**, 1 gr. in each.

**Acidi Tannici.**
Tannic Acid, 3 grs. in each.

**Acidi Tannici c. Sapone**, 3 grs. in each.

**Hydrargyri.**
Mercurial Ointment, 5 grs. in each.

**Morphiæ.**
Hydrochlorate of Morphia, ½ gr. in each.

**Morphiæ c. Sapone**, ½ gr. in each.

**Plumbi Composita.**
Acetate of Lead, 3 grs.; Opium, 1 gr. in each.

### Not Official.

*Anthelmintic.*

Santonin, 5 grs.

*Antiseptic.*

Carbolic Acid, 1 gr.

*Astringent.*

Acetate of Lead, 3 grs.
Sulphate of Copper, 2 grs.
Iron Alum, 3 grs.
Galls, in powder, 5 grs.

*Astringent and Sedative.*

Galls, in powder, 5 grs. } mixed.
Opium, in powder, 1 gr. }

*Caustic.*

Dried Sulphate of Zinc, 10 grs.

*Cicatrizing and Emollient.*

Oxide of Bismuth, 10 grs.
Borax, in powder, 5 grs.
Oxide of Zinc, 10 grs.

*Purgative.*

Purified Aloes, 5 grs.
Aloin, 1 gr. } mixed.
Soap, 5 grs. }
Elaterium, ½ gr.
Gamboge, 3 grs.
Podophyllin, 1 gr.

*Sedative.*

Belladonna Extract, 2 grs.
Hyoscyamus Extract, 5 grs.
Opium, in powder, 2 grs.
Sulphate of Morphia, ½ gr.
Extract of Opium, 1 gr.

## PESSARIES, OR VAGINAL SUPPOSITORIES.

**Not Official.**

(NO PESSARIES ARE ORDERED IN THE BRITISH PHARMACOPŒIA.)

*Antacid.*

Bicarbonate of Soda, 15 grs.

*Alterative and Resolvent.*

Iodide of Lead, 5 grs.
Iodide of Lead, 5 grs. } mixed.
Atropine, $\frac{1}{20}$ gr. }
Iodide of Potassium, 10 grs.
Bromide of Potassium, 10 grs.
Mercurial Ointment, 30 grs.

*Astringent.*

Alum, in powder, 15 grs.
Alum, 15 grs. } mixed.
Catechu, 15 grs. }
Iron Alum, 10 grs.
Acetate, of Lead, 7 grs.
Acetate of Lead, 5 grs. } mixed.
Opium Powder, 2 grs. }
Matico, in powder, 10 grs.
Sulphate of Iron, dried, 10 grs.
Gallic Acid, 10 grs.
Tannic Acid, 10 grs.

*Hæmostatic.*

Perchloride of Iron crystals, 5 grs.
Persulphate of Iron, solid, 15 grs.

*Caustic.*

Red Oxide, Mercury, 2 grs.
Sulphate of Zinc, dried, 10 grs.

*Cicatrizing and Emollient.*

Oxide of Bismuth, 15 grs.
Borax, in powder, 15 grs.
Oxide of Zinc, 15 grs.

*Deodorant.*

Carbolate of Lime, 10 grs.
Carbolic Acid, 2 grs.

*Sedative.*

Atropine, $\frac{1}{20}$ gr.
Belladonna Extract, 2 grs.
Hemlock Extract, 5 grs.
Morphia, Hydrochlorate, ½ gr.
Opium, in powder, 2 grs.

## URETHRAL SUPPOSITORIES, OR MEDICATED BOUGIES.

(Cylinders about 2½ inches long; diameter of a No. 9 bougie.)

Acetato of Lead, ½, ⅔, ¾ gr.
Nitrate of Silver, ¼ gr.
Tannic Acid, 1 gr.
Ext. Belladonna, 2 grs.
Ext. Opium, 1 gr.

White Bismuth, 10 grs.
White Bismuth, 10 grs. } mix.
Acetate of Lead, ½ gr. }
Perchloride of Iron, ½, ¾, and 1 gr.

Theobroma Oil is the usual substance employed for forming these agents, but Stearin and mixtures of Fats and Wax may be employed. The temperature at which these solidify will be found at page 315.

## MEDICATED PLEDGETS OF COTTON.

The following (weighing 30 grs. each), and containing severally the quantities of ingredients as follows, have been introduced for the local treatment of Uterine affections:—

Bromide of Potassium, 4 grs.
Iodide of Potassium, 4 grs.
Iodine, 2 grs.
Matico Tincture, ʒ ss.

Hydrochlorate of Morphia, ¾ gr.
Persulphate of Iron, 3 grs.
Tannic Acid, 2½ grs.

# AMERICAN ECLECTIC REMEDIES.

## ALTERATIVE AND APERIENT.

**Baptisin** (*Wild Indigo*). Purgative and emetic, 1 to 5 grains; given in typhus and gangrene.

*Is an hepatic, and also an intestinal stimulant of considerable power.—Dr. Rutherford.*

**Corydalin** (*Turkey Pea Root*). Antisyphilitic, alterative, tonic, ½ to 5 grs., and given with hydrastin.

**Euonymin** (*Wahoo Bark*). Mild aperient, 1 to 2 grs.; expectorant, diuretic, ¼ to 1 gr.

*Is a powerful hepatic, but feeble intestinal stimulant.—Dr. Rutherford.*

**Iridin** (*Blue Flag*). Renal alterative, ⅛ to ¼ gr.; purgative, diuretic, emetic, 1 to 5 grs.

*Is a powerful hepatic stimulant; it also stimulates the intestines.—Dr. Rutherford.*

**Juglandine** (*Butter Nut*).

*Is a moderately powerful hepatic, and a mild intestinal stimulant.—Dr. Rutherford.*

**Leptandrin** (*Veronica Virginica*). Hepatic alterative, ¼ to ½ gr.; purgative, 2 to 4 grs.

*Is an hepatic stimulant of moderate power; it is a feeble intestinal stimulant.—Dr. Rutherford.*

**Phytolaccin** (*Poke Root*). Scorbutic alterative, ⅛ to ¼ gr.; purgative, slow emetic, ¼ to 1 gr., employed in chronic rheumatism.

*Is a powerful hepatic stimulant; it also slightly stimulates the intestinal glands.—Dr. Rutherford.*

**Podophyllin.** See page 245.

**Rumicin** (*Yellow Dock*). Astringent, antiscorbutic, alterative, 2 to 5 grs.

**Sanguinarin** (*Blood Root*). Hepatic alterative ¼ to 1 gr.; somewhat narcotic.

*Is a powerful hepatic, but a feeble intestinal stimulant.—Dr. Rutherford.*

## TONIC, ETC.

**Asclepedin** (*Pleurisy Root*). Expectorant and diaphoretic, 1 to 4 grs.

**Caulophyllin** (*Blue Cohosh*). Uterine and diuretic tonic, ¼ to 1 gr.; parturient, 2 to 4 grs.

**Cimicifugin.** See page 25.

**Cornin** (*Dogwood*). Stimulant astringent tonic, 1 to 10 grs.; increasing the pulse in force and frequency.

**Cypripedin** (*Ladies' Slipper*). Nervous stimulant, 1 to 3 grs.; in hypochondria.

**Gelsemin** (*Yellow Jessamin*). Nervous sedative, ½ to 2 grs.; antispasmodic anodyne.

**Geranin** (*Cranesbill*). Astringent tonic, 1 to 5 grs., and given with hydrastin in dysentery and diarrhœa.

**Hydrastin** (*Golden Seal*). Dyspeptic tonic and febrifuge, 1 to 5 grs. Is said to be identical with Muriate of Beberine.

*Is a moderately powerful stimulant of the liver, and a feeble stimulant of the intestines.—Dr. Rutherford.*

**Menispermin** (*Yellow Parilla*). Dyspeptic tonic, 1 to 2 grs.; aperient, 5 grs.

*Does not stimulate the liver; it slightly stimulates the intestinal glands.—Dr. Rutherford.*

**Scutellarin** (*Skullcap*). Nervous nonexciting tonic, 2 to 6 grs.; given in neuralgia.

**Senecionin** (*Life Root*). Diuretic and emmenagogue, 3 to 5 grs.; given in strangury.

# SPAS OF EUROPE.

## IN BRITAIN.

*The solid contents of a pint are indicated by "grains in 20 fluid ounces."*

AIRTHREY (Bridge of Allan). Saline Aperient; 91 grs. in 20 oz. Chlorides of Sodium, Calcium, and Magnesium, and Sulphate of Calcium.

ALDFIELD (Yorkshire). A soft water; slightly Sulphureous.

ASKERNE (Yorkshire). A soft water: weak Saline Aperient and Sulphureous. Old Manor, 30 grs. in 20 oz., chiefly Magnesia and Lime.

ASHBY-DE-LA-ZOUCH. Salt Brine, used only for baths, when mixed with water.

BATH (Somersetshire). Altitude 16′. The only true thermal waters in England. Saline, 17 grs. in 20 oz., chiefly Sulphate of Lime, with Carbonic Acid and Nitrogen. Swimming Bath, 88°; Cross Bath, 104°; Kingston Spring, 108° (which partly supplies King's Bath); Queen's, 112°; King's, 117°; Hot Bath, 120°. Baths for chronic rheumatism, gout, and paralysis.

BOSCOMBE (Bournemouth, Hampshire). Chalybeate; contains 2¾ grs., which includes ½ gr. Iron in 20 oz., with Carbonic Acid.

BRIGHTON (Sussex). A cold Chalybeate; contains 11⅓ grs., which includes 1 gr. Iron in 20 oz., with Carbonic Acid.

BRISTOL. Hot Wells, 80° F. Contains 7 grs. in 20 oz., chiefly Sulphates of Lime and Soda, with 4½ cubic inches of Carbonic Acid.

BUTTERBY (Durham). Sulphureous. Not important.

BUXTON (Derbyshire). Altitude 900′. Bracing air; pure water, temp. 82° F.; contains only 2¼ grs. in 20 oz., with ½ cubic inch of Carbonic Acid, and 60 cubic inches of Nitrogen. Good in chronic gout and rheumatism.

CHELTENHAM (Gloucestershire). Of the *Montpelier Spas*, No. 1 is Saline Aperient; No. 2, Ioduretted and Sulphuretted Chalybeate; 4, pure Saline; 4*a*, strongly Ioduretted Saline; 5, Ioduretted Magnesian Saline. Of the *Royal Old Wells*, one is Chalybeate, and the rest Saline Aperient; the whole with more or less Carbonic Acid. Season, from July to October.

CLIFTON (Gloucestershire). Air mild, elastic. Hot Well, 74° F. Feebly Saline; contains 5½ grs. in 20 oz. A resort for pulmonary patients.

CROFT (Yorkshire). Water 51° F. Saline, strongly Sulphureous; contains 19½ grs. in 20 oz.; chiefly Sulphate of Magnesia. Useful in skin diseases.

DINSDALE (Northamptonshire). Water 52° F. Strongly Sulphureous; contains 27 grs. in 20 oz., chiefly Sulphate of Lime. Acting on the skin and kidneys, and useful in dyspepsia.

DORTON (Buckinghamshire). Chalybeate, with Carbonic Acid; contains 12 grs. of Sulphate of Iron in 20 oz.; needs much dilution for internal use.

DROITWICH (Worcestershire). Brine pits; when diluted, used for salt-baths only.

DUNBLANE (Perthshire). Saline; contains 46 grs. in 20 oz., chiefly Chlorides of Calcium and Sodium.

FILEY (Yorkshire). Saline aperient; contains 49 grs. in 20 oz., chiefly Chlorides of Sodium, Magnesium, and Calcium, and Sulphate of Magnesia.

FLITWICK (Ampthill, Beds). Chalybeate Aperient; contains 31 grs. in 20 oz., Carbonate of Iron, Sulphates of Magnesia and Soda, Chloride of Magnesium, and Carbonate of Lime.

GAINSBOROUGH (Lincolnshire). Weak Saline, Chalybeate; not important.

GILSLAND (Cumberland). Air bracing and very healthy. Two springs; one strongly Chalybeate, and one strongly Sulphureous, useful in skin diseases and dyspepsia.

GLOUCESTER SPA. Contains 70 grains in 20 oz., chiefly Chloride of Sodium and Sulphate of Soda; not important.

HAIL-WESTON (St. Neots, Hunts). Saline Aperient; contains 30 grs. in 20 oz., more than half of which is Chloride of Sodium; also Sulphates of Magnesia and Soda, and Carbonate of Lime.

HARROGATE (Yorkshire). The old Sulphur spring contains 137 grs. in 20 ozs., chiefly Chlorides, with 3·12 cubic inches of Carbonic Acid Gas, and 1·4 Sulphuretted and Carburetted Hydrogen. There are two principal Chalybeate springs. The new spring contains 62 grs. in 20 oz., chiefly Chlorides of Calcium, Magnesium, Potassium, and Sodium, with protochloride of Iron, together with Carbonic Acid and Nitrogen.

HASTINGS (Sussex). Air mild, Chalybeate ; contains 2¾ grs. in 20 oz., chiefly Sulphates of Iron, Magnesia, Lime, and Soda, with 3¼ cubic inches Carbonic Acid Gas.

HOCKLEY (near Southend, Essex). Saline, and very mild Aperient.

HORLEY GREEN (Yorkshire). Aluminous, and strongly Chalybeate; contains large quantities of Sulphate of Iron. Not much used.

HOVINGDON (Northumberland). Feebly Alkaline and Sulphureous; 6 grs. in 20 oz., chiefly Carbonate of Soda and Chloride of Sodium.

INVERLEITHEN (Peeblesshire). Air pure, and scenery good. Saline; 28 grs. in 20 oz., chiefly Chlorides of Calcium and Sodium.

KINGSWOOD (Gloucestershire). Cherry rock bitter water; 56 grs. in 20 oz., chiefly Sulphates of Magnesia and Soda, with 4 cubic inches of Carbonic Acid.

LEAMINGTON (Warwickshire). Old Well, 48° F., contains 104 grs. in 20 oz., chiefly Chlorides of Calcium and Sodium, and Sulphate of Soda with Carbonic Acid. The Saline Chalybeate contains 132 grs. in 20 oz., chiefly Chlorides of Calcium, Magnesium, and Sodium, and Sulphate of Soda, with 2 cubic inches of Carbonic Acid. There are also other springs, useful in stomach and liver complaints.

LONDON, Bagnigge Wells, 1 Aperient, 1 Chalybeate; Chad's Well, near Battle Bridge, and St. Pancras Wells, both Aperient; Hampstead, Sadler's Wells, and Kensington Gardens, Chalybeate: Beulah, Kilburn, Epsom, and Streatham, are all Aperient; chiefly Sulphate of Magnesia.

MALTON (Yorkshire). A strong Saline Chalybeate, similar to Scarborough.

MALVERN (Worcestershire). Air mild, highly salubrious. Holywell, St. Anne, cold and pure, highly useful in painful affections of the kidneys and bladder.

MATLOCK (Derbyshire). Climate mild and humid. Calcareous, slightly Chalybeate, with Carbonic Acid.

MELKSHAM (Wiltshire). Two springs, one Saline, and one Chalybeate. These waters are charged with Carbonic Acid artificially, and bottled.

MOFFAT (Dumfriesshire). Hartfell spring, Aluminous and strongly Chalybeate; 12 grs. in 20 oz. A resort for pulmonary patients. Sulphur Wells, contains 4½ grs. in 20 oz., chiefly Chloride of Sodium, 1 cubic inch of Sulphuretted Hydrogen.

PITKEATHLY (Perthshire). Saline; contains 38 grs. in 20 oz., chiefly Chloride of Calcium and Chloride of Sodium, and 1 cubic inch of Carbonic Acid.

PURTON (Wiltshire). Iodide of Sodium and Bromide of Magnesium, with Sulphates of Magnesia and Soda: 43½ grs. in 20 oz., and 6 cubic inches of Carbonic Acid Gas.

SANDROCK (I. of Wight). Aluminous Chalybeate, with Carbonic Acid; contains 41½ grs. of Sulphate of Iron, and 31½ grs. of Sulphate of Alumina in 20 oz. Used for baths, but much diluted when taken internally.

SCARBOROUGH (Yorkshire). Altitude 174′. Two Saline Chalybeates. North Well, 46½ grs. in 20 oz. South Well, 66 grs. in 20 oz. Both Wells are similarly constituted, containing Sulphate of Lime and Sulphate of Magnesia, with a small amount of Nitrogen Gas.

SHAP (Westmoreland). Saline; contains 48 grs. to 20 oz., of which 26 are Chloride of Calcium; also traces of Sulphuretted Hydrogen. Tonic and diuretic; good in scrofula.

SHOTLEY (Northumberland). Saline, Chalybeate; contains 20 grs. in 20 oz., chiefly Chloride of Sodium, with 1 gr. Oxide of Iron, and 4½ grs. Chloride of Calcium. Not much frequented.

STRATHPEFFER (Ross-shire). Two springs; the Upper contains 18 grs. in 20 oz., chiefly Sulphates of Soda and Lime, with 3¼ c. in. of Sulphuretted Hydrogen; the Lower contains 13½ grs. in 20 oz. of the same Salts, but with only 1⅔ c. in. of Sulphuretted Hydrogen. The Upper contains the largest quantity of Sulphuretted Hydrogen of any spring in Britain. Much resorted to for gout, rheumatism, scrofula, and skin diseases.

TUNBRIDGE (Kent). Altitude 289′. Chalybeate; temp. 50° F.; contains only 1 gr. in 20 oz., including ⅛th of a grain of Iron, with Carbonic Acid.

TYNEMOUTH (Northumberland). Scenery picturesque. Chalybeates which may be drunk as an auxiliary to the sea-bathing, as at Scarborough.

VICTORIA (Stratford, Essex). Saline Aperient; contains 81 grs. in 20 oz, chiefly Sulphate of Soda, and ½ cubic inch of Sulphuretted Hydrogen. Useful in stomach and liver diseases.

WHITBY (Yorkshire). Bagdale, Chalybeate; nearly 3 grs. in 20 oz., and ⅓th gr. of Carbonate of Iron.

WINFRED at Holywell (Flintshire). Pure water, and flows at the rate of 21 tons a minute.

WOODHALL (Lincolnshire). 55° F. Iodine and Bromine, with Chlorides of Calcium, Magnesium, Potassium, more than ½ gr. Bromide of Sodium, and ¼ gr. Iodide of Sodium: 190 grs. in 20 oz.; strongly impregnated with Carbonic Acid. Useful in chronic rheumatism, scrofula, tertiary syphilis, etc.

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## FOREIGN.

*The dose is from a wineglassful to a tumblerful, and at the spas the gas is often allowed to escape.*

ACHSELMANNSTEIN (Bavaria), altitude 1407′. Saline, aperient, and slightly chalybeate. Climate mild and equable. Season, May to September.

Baths and Vapour Baths, for incipient tuberculosis, cutaneous diseases, and derangements of the uterine system.

*Buchner's Analysis* of 16 oz. Troy=7680 grs. of the Edelquelle brine spring:—

| | | | |
|---|---|---|---|
| | | | 1757·69 |
| Chloride of Sodium . . | 1723·10 | Sulphate of Lime . . . | 31·98 |
| Chloride of Ammonium | ·19 | Carbonate of Lime . . . | ·07 |
| Chloride of Magnesium | 13·84 | Carbonate of Magnesia . | traces |
| Bromide of Magnesium | ·23 | Peroxide of Iron and Alumina . . . . . . . | ·06 |
| Sulphate of Soda . . . | 15·63 | Silica . . . . . . . . | ·08 |
| Sulphate of Potash . . | 4·70 | | |
| | 1757·69 | | 1789·88 grs. |

*Gas.*—Carbonic Acid.

ADELHEIDSQUELLE (Heilbrunn, a healthy town in Bavaria), altitude 2000′. Saline, with Iodine and Bromine. Temp. of spring, 50° F. Season, May to September.

Powerfully alterative and tonic. Useful in scrofulous complaints, strumous affections of the skin, rheumatism, and gout, and for complaints peculiar to females.

*Pettenkofer's Analysis* of 16 oz. Troy=7680 grs.—Contains about 47 grs. of solid matter, viz.:—

| | |
|---|---|
| Chloride of Sodium | 38·06 |
| Iodide of Sodium | ·21 |
| Bromide of Sodium | ·36 |
| Carbonate of Soda | 6·21 |
| Chloride of Potassium | ·02 |
| Sulphate of Soda | ·04 |
| Carbonate of Lime | ·58 |
| | 45·48 |
| | 45·48 |
| Carbonate of Magnesia | ·14 |
| Alumina | ·14 |
| Carbonate of Iron | ·07 |
| Silica | ·14 |
| Phosphate of Lime | traces |
| Organic matter | ·16 |
| | 46·13 grs. |

| *Gases.* | | Cub. Inch. |
|---|---|---|
| | Carbonic Acid | 13·18 |
| | Carburetted Hydrogen | 8·02 |
| | Nitrogen | 6·54 |
| | Oxygen | 1·38 |
| | | 29·12 |

Imported.

AIX-LA-CHAPELLE (Rhenish Prussia), altitude 450′. Situated in a valley. Climate mild. Mean temperature in June, July, and August, 63° F. Saline, sulphureous.

Used for drinking, bathing, and douching; in cutaneous diseases, stiffness of joints, paralysis, obstructions of the liver, and syphilis.

*Liebig's Analysis* of 16 oz. Troy = 7680 grs.:—

| | Kaiser-quelle. | Cornelius-quelle. | Rosen-quelle. | Quirinus-quelle. | |
|---|---|---|---|---|---|
| Temperature, Fahr. | 131° | 121·3°. | 116·6°. | 113·6°. | |
| Chloride of Sodium | 20·271 | 18·934 | 19·552 | 19·937 | grains. |
| Bromide of Sodium | ·028 | ·028 | ·028 | ·028 | „ |
| Iodide of Sodium | ·004 | ·004 | ·004 | ·004 | „ |
| Sulphuret of Sodium | ·073 | ·042 | ·057 | ·018 | „ |
| Carbonate of Soda | 4·995 | 3·817 | 4·065 | 4·244 | „ |
| Sulphate of Soda | 2·171 | 2·201 | 2·176 | 2·243 | „ |
| Sulphate of Potash | 1·186 | 1·204 | 1·183 | 1·164 | „ |
| Carbonate of Lime | 1·217 | 1·012 | 1·413 | 1·330 | „ |
| Carbonate of Magnesia | ·395 | ·192 | ·204 | ·257 | „ |
| Carbonate of Strontia | ·002 | ·002 | ·002 | ·002 | „ |
| Carbonate of Lithia | ·002 | ·002 | ·002 | ·002 | „ |
| Carbonate of Protoxide of Iron | ·073 | ·046 | ·046 | ·040 | „ |
| Silica | ·508 | ·459 | ·455 | ·476 | „ |
| Organic Matter | ·577 | ·713 | ·703 | ·751 | „ |
| | 31·502 | 28·654 | 29·888 | 30·496 | grains. |
| *Gases.* | | | | | |
| Nitrogen | 9·00 | 7·79 | 9·14 | 6·41 | per cent. |
| Carbonic Acid | 89·40 | 92·91 | 90·31 | 93·25 | „ |
| Carburetted Hydrogen | ·37 | traces | ·55 | ·26 | „ |
| Oxygen | 1·23 | traces | 0·00 | ·08 | „ |

Imported.

AIX-LES-BAINS (Savoy), altitude 768′. Climate mild. For drinking and for douching.

Recommended for rheumatism, eczema, gout, and sciatica.

*Bonjean's Analysis* of 16 oz. Troy=7680 grs.:—

| | Sulphur Spring. | Alum Spring. | |
|---|---|---|---|
| Temperature, Fahr. | 108·25°—111°. | 108·25°—116·34°. | |
| Sulphate of Soda | ·7374 | ·3256 | grains. |
| Sulphate of Magnesia | ·2709 | ·2380 | „ |
| Sulphate of Lime | ·1229 | ·1152 | „ |
| | 1·1312 | ·6788 | (*continued*) |

| | Sulphur Spring. | Alum Spring. | |
|---|---|---|---|
| *Continued.* | 1·1312 | ·6788 | grains. |
| Sulphate of Alumina | ·4209 | ·4761 | ,, |
| Sulphate of Iron | traces | traces | ,, |
| Chloride of Sodium | ·0613 | ·1075 | ,, |
| Chloride of Magnesium | ·1322 | ·1690 | ,, |
| Fluoride of Calcium<br>Phosphate of Lime and Alumina | ·0191 | ·0200 | ,, |
| Iodide of Potassium | traces | traces | ,, |
| Carbonate of Lime | 1·1405 | 1·3901 | ,, |
| Carbonate of Strontia | traces | traces | ,, |
| Carbonate of Protoxide of Iron | ·0680 | ·0719 | ,, |
| Silica | ·0384 | ·0330 | ,, |
| | 3·0116 | 2·9464 | grains. |
| *Gases.* | | | |
| Nitrogen | ·03204 | ·08010 | volumes. |
| Carbonic Acid | ·02578 | ·01334 | ,, |
| Sulphuretted Hydrogen | ·04140 | ·0 | ,, |
| Oxygen | ·0 | ·01840 | ,, |
| | ·09922 | ·11184 | volumes. |

**ALET** (Aude, France). Thermal 82° F. for baths and a ferruginous water 50°. Tonic, and useful in cases of debility and dyspepsia.

**ALEXANDERBAD** (Bavaria). Altitude 1754′. Climate rough, and unsuited for delicate lungs. Scenery good. Water chalybeate, 50° F., very exciting. There is a hydropathic establishment, and pine-foliage baths for rheumatism.

Contains 2½ grains of solid constituents in 16 oz. Troy = 7680 grs.
about ½ grain Carbonate of Iron,
and 28 cubic inches of Carbonic Acid.

**ALEXISBAD** (Germany, 2 miles W. of Harzgerode). In the romantic Selke valley.

Source, Selkenbrunnen, Saline ; 1¼ grain in 16 oz. troy.
,, Alexisbrunnen, Ferruginous ; 3½ grains in 16 oz. troy.
,, Ernabrunnen, Ferruginous ; 1¼ grain in 16 oz. troy.

**ALTWASSER** (Prussian Silesia, 35 miles S.W. of Breslau). Altitude 1255′. Lies in a charming valley. Climate mild and bracing. Water alkaline, chalybeate, tonic, restorative, for drinking and for baths.

*Fischer's Analysis* of 16 oz. Troy = 7680 grs.

| | Georgen-brunnen. | Ober-brunnen. | |
|---|---|---|---|
| Temperature, Fahr. | 70°. | 70°. | |
| Carbonate of Iron | ·37 | ·306 | grains. |
| Carbonate of Manganese | 0 | ·13 | ,, |
| Chloride of Potassium | ·09 | ·09 | ,, |
| Sulphate of Potash | 0 | .086 | ,, |
| Sulphate of Soda | ·89 | ·40 | ,, |
| Sulphate of Magnesia | 0 | ·25 | ,, |
| Carbonate of Magnesia | ·72 | ·308 | ,, |
| Carbonate of Lime | 2·88 | ·860 | ,, |
| Sulphate of Lime | 0 | ·100 | ,, |
| Carbonate of Soda | 1·21 | ·000 | ,, |
| Silica | ·08 | ·52 | ,, |
| | 6·54 | 3·18 | |
| Carbonic Acid | 106 in 100 | 50 in 100 | volumes. |

**APOLLINARIS** (Neuenahr). Imported and drunk at meals. (*See* Neuenahr.)

**ARNSTADT** (Germany, 10 miles W. of Erfurt). Altitude 926′. Climate healthy. Season, June to September. Its brine spring, when diluted, used for baths, and for poultices with bran or malt; for scrofula. Contains about 1825 grains of solids in 16 oz. Troy = 7680 grs. viz.:—

| | | |
|---|---|---|
| Chloride of Sodium | 1723· | grains. |
| Chloride of Calcium | 49·5 | „ |
| Chloride of Magnesium | 39· | „ |
| Sulphate of Lime | 13· | „ |
| Bromide of Magnesium | 0·39 | „ |

**AUTEUIL** (Seine, France). A ferruginous water having properties similar to that of Alet.

**BADEN** (near Vienna). Altitude 638′. Air bracing, temperature changeable. Sulphureous and saline.

Chiefly used for bathing, in which both sexes promenade. The mineralized mud is employed for cataplasms in rheumatism.

*Keller's Analysis* of 16 oz. Troy = 7680 grs.:—

| | Römer-quelle. | Leopold's-quelle. | |
|---|---|---|---|
| Temperature, | 92°—97° Fahr. | 91·70°. | |
| Sulphuret of Magnesium | 0·1250 | ·1180 | grains. |
| Sulphate of Lime | 5·6563 | 5·5473 | „ |
| Sulphate of Potash | ·4892 | ·5560 | „ |
| Sulphate of Soda | 2·1281 | 2·5766 | „ |
| Chloride of Sodium | 1·9906 | 2·2659 | „ |
| Carbonate of Lime | 1·3056 | 1·5936 | „ |
| Carbonate of Soda | ·5329 | ·0530 | „ |
| Chloride of Magnesium | 1·6156 | 1·5145 | „ |
| Silica | ·1850 | ·2166 | „ |
| Organic Matter | ·0431 | 0 | „ |
| | 14·0714 | 14·4415 | grains. |
| *Gases.* | | | |
| Carbonic Acid | 1·433 | 3·2256 | cubic inches. |
| Sulphuretted Hydrogen | ·082 | ·6720 | „ |
| Nitrogen | ·465 | 7·8711 | „ |
| Oxygen | ·052 | ·9033 | „ |
| | 2·032 | 12·6780 | cubic inches. |

**BADEN-BADEN.** Altitude 616′. Air pure and mild. Mean annual temperature 48° F. Season, May to October.

Baths for rheumatism and paralysis.

*Bunsen's Analysis* of 16 oz. Troy = 7680 grs.:—

| | Hauptquelle. Temperature 155·7° F. | |
|---|---|---|
| Chloride of Sodium | 16·520 | grains. |
| Bicarbonate of Lime | 1·273 | „ |
| Bicarbonate of Magnesia | ·042 | „ |
| Bicarbonate of Protoxide of Iron | ·037 | „ |
| Bicarbonate of Protoxide of Manganese | traces | |
| Bicarbonate of Ammonia | ·051 | „ |
| Sulphate of Lime | 1·556 | „ |
| Sulphate of Potash | ·017 | „ |
| Phosphate of Lime | ·021 | „ |
| Arseniate of Iron | traces | |
| Chloride of Magnesium | ·097 | „ |
| Chloride of Potassium | 1·258 | „ |
| Bromide of Sodium | traces | |
| Silica | ·914 | „ |
| Alumina | ·008 | „ |
| Nitrates | traces | |
| | 22·093 | grains. |
| Free Carbonic Acid | ·299 | grains. |

The Lithia waters for gout and lithiasis:—

| | Mur-quelle. | Fett-quelle. | |
|---|---|---|---|
| Chloride of Sodium | 15·5534 | 16·9767 | grains. |
| Chloride of Lithium | 2·3694 | ·2315 | ,, |
| Chloride of Potassium | 1·7985 | ·8137 | ,, |
| Chloride of Magnesium | ·8022 | ·4406 | ,, |
| Chloride of Calcium | ·5127 | | ,, |
| Chloride of Copper | | trace | ,, |
| Bicarbonate of Lime | ·9748 | 1·4760 | ,, |
| Bicarbonate of Magnesia | ·2673 | ·0112 | ,, |
| Bicarbonate of Protoxide of Iron | ·0029 | ·0112 | ,, |
| Bicarbonate of Protoxide of Manganese | trace | trace | ,, |
| Sulphate of Lime | 1·8524 | 1·3390 | ,, |
| Sulphate of Potash | | ·3344 | ,, |
| Sulphate of Strontia | ·0052 | | ,, |
| Sulphate of Baryta | | trace | ,, |
| Ammonia | trace | trace | ,, |
| Arseniate of Iron | trace | ·0038 | ,, |
| Silica | ·3200 | ·4477 | ,, |
| | 24·4588 | 22·0858 | ,, |

BAGNÈRES-DE-LUCHON (South of France). Altitude 2000′. Season, May to October.

Contains about 2 grains to 20 oz. of Sulphurets of Iron, Manganese, Sodium. The springs range in temperature from 60° F. to 154° F.; water is clear; has a sulphureous odour; is good in lymphatic and cutaneous affections.

BARÉGES (Hautes-Pyrénées, France). Altitude 4000′. There are nine sulphureous springs. Temperature 86° to 111° F. Season, May to September. Useful in inveterate chronic rheumatism and skin diseases.

*Analysis* of 16 oz. Troy = 7680 grs. Le Tambour Source:—

| | | |
|---|---|---|
| Sulphuret of Sodium | ·360 | grains. |
| Sulphate of Soda | ·384 | ,, |
| Chloride of Sodium | ·307 | ,, |
| Silica | ·519 | ,, |
| Lime | ·022 | ,, |
| Magnesia | ·026 | ,, |
| Soda | ·039 | ,, |
| *Gases.* | 1·657 | grains. |
| Nitrogen | ·004 | c. in. |

Imported.

BELLTHAL (Rhenish Prussia, near Coblentz). Altitude 400′. Drunk as a table water.

*Contents* in 10,000 parts:—

| | |
|---|---|
| Carbonate of Soda | 2·7918 |
| Carbonate of Potash | ·6898 |
| Silicate of Soda | ·6974 |
| Carbonate of Magnesia | 2·5676 |
| Carbonate of Lime | 5·9773 |
| Chloride of Sodium | ·2738 |
| Sulphate of Soda | ·1243 |
| Nitrate of Soda | ·0745 |
| Carbonate of Iron | ·0198 |
| Carbonate of Ammonia | ·0076 |
| Carbonate of Manganese | ·0047 |
| Phosphate of Lime | ·0015 |
| Alumina | ·0026 |
| Free Carbonic Acid | 36·410 parts by volume |

Imported.

**BERKA** (Duchy of Saxe-Weimar).

The sulphureous spring contains 13½ grains of solids in 16 oz. Troy = 7680 grs. For chronic rheumatism, anæmia, and great debility.

| | | |
|---|---|---|
| Sulphate of Lime | 5·5 | grains. |
| Carbonate of Lime | 4·33 | ,, |
| Sulphate of Soda | 1 | ,, |
| Sulphate of Magnesia | 2 | ,, |
| Chloride of Calcium | 0·7 | ,, |

*Gases.*

| | | |
|---|---|---|
| Carbonic Acid | 3·4 | c. inches. |
| Sulphuretted Hydrogen with Nitrogen | 6·4 | ,, |

The chalybeate spring contains about 22 grains of solids in 16 oz. viz.:—

| | | |
|---|---|---|
| Sulphate of Lime | 13·5 | grains. |
| Carbonate of Lime | 3·5 | ,, |
| Chloride of Calcium | 0·5 | ,, |
| Chloride of Magnesium | 0·5 | ,, |
| Carbonate of Magnesium | 0·4 | ,, |
| Sulphate of Magnesia | 3·0 | ,, |
| Carbonate of Iron | 0·3 | ,, |

**BILIN** (Bohemia). Altitude 645′.

Taken for indigestion and acidity of the stomach, and drunk as a table water.

*Analysis* of 16 oz. Troy = 7680 grs.:—

| | | |
|---|---|---|
| Carbonate of Soda | 23·106 | grains. |
| Carbonate of Lime | 3·089 | ,, |
| Carbonate of Magnesia | 1·098 | ,, |
| Carbonate of Lithia | ·110 | ,, |
| Carbonate of Iron | ·080 | ,, |
| Sulphate of Soda | 6·350 | ,, |
| Sulphate of Potash | ·985 | ,, |
| Chloride of Sodium | 2·935 | ,, |
| Phosphate of Alumina | ·065 | ,, |
| Silica | ·244 | ,, |
| | 38·062 | ,, |
| Free Carbonic Acid | 15·092 | cubic inches. |
| Carbonic Acid (as bicarbonate) | 17·247 | ,, ,, |

Imported.

**BIRMENSTORF** (Switzerland). Altitude 1300′. A mild laxative. Dose, ½ to ¾ of a tumblerful half an hour before breakfast. Temp. 50° F.

*Analysis* of 1,000 parts according to Bolley:—

| | |
|---|---|
| Sulphate of Potash | ·1042 |
| Sulphate of Soda | 7·0356 |
| Sulphate of Lime | 1·2692 |
| Sulphate of Magnesia | 22·0135 |
| Chloride of Magnesium | ·4604 |
| Carbonate of Lime | ·0133 |
| Carbonate of Magnesia | ·0324 |
| Magnesia (crenate of) | ·1010 |
| Peroxide of Iron | 1·0107 |
| Alumina | ·0277 |
| Silica | ·0302 |
| | 31·0982 |

Imported.

BIRRESBORN (Rhenish Prussia). Altitude 1100′. **A table water, drunk *ad lib.***

*Analysis* of 1000 parts :—

| | |
|---|---|
| Bicarbonate of Soda | 2·851681 |
| Bicarbonate of Lithia | ·003346 |
| Bicarbonate of Lime | ·272988 |
| Bicarbonate of Baryta<br>Bicarbonate of Strontia | ·000154 |
| Bicarbonate of Magnesia | 1·092873 |
| Bicarbonate of Protoxide of Iron | ·035116 |
| Bicarbonate of Manganese | ·000668 |
| Biborate of Soda | traces. |
| Sulphate of Potash | ·052091 |
| Sulphate of Soda | ·135926 |
| Chloride of Sodium | ·357620 |
| Bromide of Sodium | ·000363 |
| Iodide of Sodium | ·000005 |
| Phosphate of Soda | ·000228 |
| Nitrate of Soda | traces. |
| Phosphate of Alumina | traces. |
| Silicic Acid | ·024532 |
| | 4·827591 |
| Free Carbonic Acid | 2·333967 |
| | 7·161558 |

BOCKLET (near Kissingen). Altitude 620′. Pleasant residence.
Tonic, useful in diseases peculiar to females. Carbonic Acid Baths.

| Temperature 50° F.<br>*Analysis* of 16 oz. Troy = 7680 grs. :— | Ludwig's-quelle. (Ludwig's Spring.) | Schwefel-quelle. (Sulphur Spring.) | Stahl-quelle. (Steel Spring.) |
|---|---|---|---|
| Sulphate of Soda | 6·25 | ·25 | 2·54 grs. |
| Sulphate of Magnesia | 0 | 0 | 3·23 ,, |
| Sulphate of Lime | ·50 | 0 | 0 ,, |
| Chloride of Sodium | 27·50 | ·25 | 6·55 ,, |
| Chloride of Magnesium | 0·75 | 0 | 4·43 ,, |
| Carbonate of Soda | 0 | ·50 | 0 ,, |
| Carbonate of Magnesia | 1·25 | ·50 | 3·36 ,, |
| Carbonate of Lime | 7·25 | 2·50 | 6·54 ,, |
| Carbonate of Iron | ·65 | ·40 | ·61 ,, |
| Silica | ·50 | ·10 | ·22 ,, |
| | 44·65 | 4·90 | 27·48 ,, |
| *Gases.* | | | |
| Carbonic Acid | 31 | 21·5 | 39·3 |
| Sulphuretted Hydrogen | 0 | 0·2 | 0 |

BONNES (Basses-Pyrénées, France). Altitude 2000′. Air cold and penetrating. A sulphureous and saline water, less exciting than Baréges. Imported. Contains in 16 oz. Troy=7680 grs., 5⅓ grains of solids.

BONNES (Basses-Pyrénées).
Increases the natural secretion of the skin and kidneys. Dose, ¼ to ⅓ a tumbler taken before breakfast with two or three spoonfuls of boiling milk.

*Analysis* of 1 gallon=70,000 grs. :—

| | |
|---|---|
| Chloride of Potassium | 2·40 |
| Chloride of Sodium | 17·59 |
| Sulphate of Sodium | 2·86 |
| Silicate of Sodium | 5·28 |
| Sulphate of Calcium | 11·14 |
| Silica | 1·02 |
| Magnesium, Lithium,<br>Nitrates, and Phosphates | traces. |
| Sulphuretted Hydrogen | 1½ cubic inches. |

**BORCETTE or BURTSCHEID** (near Aix-la-Chapelle).

There are two kinds of springs,—the warmer one, Mühlenbadquelle, 171° F., is free from Sulphuretted Hydrogen; the cooler, from 110° to 140°, contains Sulphuretted Hydrogen. Both kinds are used for baths.

**BOURBOULE (la)** (Puy-de-Dôme, France). Altitude 2600′.

Drunk for diseases arising from impoverished blood, skin diseases, rheumatism, gout, sciatica, &c.

*Analysis* of one litre "Choussy" Spring:—

| | | |
|---|---|---|
| Arsenious Acid (Arsenicum ·0075) | ·0115 | grammes. |
| Hydrochloric Acid | 2·0447 | ,, |
| Sulphuric Acid | ·1098 | ,, |
| Silica | ·0420 | ,, |
| Oxide of Iron | ·0053 | ,, |
| Lime | ·0490 | ,, |
| Magnesia | ·0092 | ,, |
| Soda | 2.6395 | ,, |
| Potash | ·0731 | ,, |
| Lithia | traces | ,, |
| | 4·9841 | ,, |
| Free Carbonic Acid | ·3513 | ,, |
| Do. as Carbonates | 1·3242 | ,, |
| | 6·6596 | ,, |

*Analysis* of one litre "Perrière" Spring:—

| | | |
|---|---|---|
| Arsenious Acid (Arsenicum ·0070) | ·0108 | grammes. |
| Chloride of Sodium | 2·8406 | ,, |
| Chloride of Potassium | ·1623 | ,, |
| Chloride of Magnesium | ·0320 | ,, |
| Bicarbonate of Soda | 2·8920 | ,, |
| Bicarbonate of Lime | ·1905 | ,, |
| Sulphate of Soda | ·2084 | ,, |
| Peroxide of Iron | ·0021 | ,, |
| Silica | ·0200 | ,, |
| Alumina | traces | ,, |
| | ·3587 | ,, |
| Free Carbonic Acid | ·0518 | ,, |
| | 6·4105 | ,, |

**BUDA-PESTH** (Hungary). Bitter Aperient Water.

In 16 oz. Troy = 7680 grs.

| | Hunyadi Janos. | | Royal Hungarian. |
|---|---|---|---|
| | Liebig. | Bunsen. | Prof. Than. |
| Sulphate of Magnesia | 122·8 | 171·64 | 138·17 grs. |
| ,, Soda | 122·1 | 173·18 | 114·43 ,, |
| ,, Potash | ·65 | ·92 | 2·18 ,, |
| ,, Lime | — | — | 11·62 ,, |
| Chloride of Sodium | 9·98 | 13·05 | 22·13 ,, |
| Bicarbonate of Soda | 6·11 | 5·20 | 13·19 ,, |
| Carbonate of Soda | — | — | 2·09 ,, |
| Carbonate of Lime | 7·16 | 6·12 | ,, |
| Carbonate of Strontia | — | ·20 | ,, |
| Oxide of Iron and Alumina | ·03 | ·004 | ·03 ,, |
| Siliceous Earth | ·008 | ·08 | ·03 ,, |
| Carbonic Acid free and combined | 4·00 | 4·0 | 2·53 ,, |
| | Imported. | | Imported. |

BUDA or OFEN (opposite Pesth, Hungary). Altitude 461′.

Used externally. Efficacious in chronic gout, rheumatism, eczema, and psoriasis. Internally, in gastric catarrh, gouty diathesis, ulceration of the stomach, obstinate constipation. There are three swimming baths.

*Sigmundi's Analysis* of 16 oz. of the Trinkquelle:—

Temperature, 141·5° Fahr.

| | |
|---|---|
| Sulphate of Soda | 2·95 grains. |
| Chloride of Sodium | ·82 „ |
| Carbonate of Soda | 2·02 „ |
| Carbonate of Magnesia | 0·46 „ |
| Carbonate of Lime | 3·12 „ |
| Silica | 0·69 „ |
| Alumina | 0·18 „ |
| *Gases.* | 10·24 grains. |
| Carbonic Acid | 5·72 c. inches. |
| Sulphuretted Hydrogen | traces. |

BUSSANG (Vosges, France). A ferruginous and alkaline water, mild, laxative, for weak digestion. Dose Half-a-pint half an hour before meals.

*Analysis* of 1 Litre.

| | |
|---|---|
| Carbonate of Soda | ·789 grammes. |
| Carbonate of Lime | ·340 „ |
| Carbonate of Magnesia | ·150 „ |
| Carbonate of Strontia | traces |
| Carbonate of Iron | ·017 „ |
| Crenate of Iron, Manganese, and traces of Chloride of Sodium | ·078 „ |
| Sulphate of Soda and Lime | ·110 „ |
| Silicate of Soda | ·002 „ |
| Silicate of Lime | |
| Silicate of Alumina | |
| | 1·486 „ |
| Free Carbonic Acid | ·41 Litre. |

Imported.

CARLSBAD (Bohemia). Altitude 1200′. Season, June to September.

Drunk for obstinate constipation, affections of liver, gout, rheumatism, and diabetes.

*Göttl's Analysis* of 16 oz. Troy = 7680 grs.:—

| | Sprudel. 162° F. | Schloss-brunnen. 122° F. | Wolf's Analysis. Markt-Brunnen. 119·3° F. |
|---|---|---|---|
| Sulphate of Soda | 19·9606 | 10·145 | 17·9919 grs. |
| Carbonate of Soda | 9·0624 | 8·555 | 9·4553 „ |
| Chloride of Sodium | 8·7245 | 8·463 | 8·3298 „ |
| Sulphate of Potash | ·3696 | 11·558 | 1·9603 „ |
| Carbonate of Lime | 2·0198 | 2·419 | 2·1418 „ |
| Carbonate of Magnesia | ·3996 | ·299 | 1·8987 „ |
| Carbonate of Iron | ·0307 | ·023 | ·0890 „ |
| Phosphate of Alumina | ·2150 | ·031 | 0 „ |
| Silica | 1·0520 | ·43 | 1·3271 „ |
| Carbonate of Lithia | 0 | 0 | ·0100 „ |
| Carbonate of Strontia | 0 | 0 | ·0377 „ |
| Carbonate of Manganese | 0 | 0 | ·0185 „ |
| Iodide of Sodium | 0 | 0 | ·0209 „ |
| Bromide of Sodium | 0 | 0 | ·0133 „ |
| Phosphate of Soda | 0 | 0 | ·0160 „ |
| Fluoride of Sodium and Silicium | 0 | 0 | 1·4288 „ |
| Alumina and Peroxide of Iron | 0 | 0 | ·0251 „ |
| *Gases.* | 41·8340 | 41·922 | 44·7642 grs. |
| Carbonic Acid | 7·8033 | 0 | 11·7602 |
| Nitrogen | ·0318 | 0 | ·0530 |

Imported.

GIESSHÜBLER, Temperature 7·2 to 7·5 R=45·° to 45·5° F.

*Liebig's Analysis* of 16 ozs. Troy=7680 grs.:—

| | |
|---|---|
| Bicarbonate of Soda | 9·6944532 |
| Chloride of Sodium | 0·3070264 |
| Sulphate of Soda | 0·3761548 |
| „ Potash | 0·5197317 |
| Bicarbonate of Lime | 2·7794533 |
| „ Magnesia | 2·0694743 |
| „ Protoxide of Iron | 0·0468486 |
| „ „ Manganese | 0·0375306 |
| Silicic Acid | 0·4456797 |
| Bicarbonate of Lithia | 0·0714685 |
| Alumina | 0·0201600 |
| Organic Matter | 0·0020474 |
| Total of Solid Constituents | 16·3700285 |
| Real free Carbonic Acid Gas | 20·6317593 |
| Total Constituents | 37·0017878 |

Imported and drunk at meals.

CAUTERET (Hautes-Pyrénées). Altitude 3000′. Climate mild and sheltered. Temperature of Sulphur baths 98° to 131° F. Season, June to September. Rich in iodine, and more exciting than Barèges. Imported.

CHALLES (Savoy). Sulphureous, milder than Barèges. Imported.

CHARLOTTENBRUNNEN (Silesia). Altitude 1437′. Sheltered. Climate mild and bracing.

Excellent arrangements for whey-cure. Is resorted to for chronic pulmonary catarrh and atonic dyspepsia.

Charlottenquelle (a mild chalybeate) contains 5½ grains of solids in 16 oz. Troy=7680 grs. Among them—

| | |
|---|---|
| Carbonate of Iron | 0·2 grains. |
| Carbonate of Soda | 1·5 „ |
| Carbonate of Lime | 2·3 „ |
| Carbonate of Magnesia | 0·5 „ |
| Carbonic Acid | 18 c. in. |

Elisenquelle (acidulous spring) contains 4 grains of solids in 16 oz. Amongst them—

| | |
|---|---|
| Iron | traces. |
| Carbonic Acid | 17¼ c. in. |

CHATELDON (France). Imported.
CONDILLAC (France). Imported.
} Are gaseous drinking-waters.

CONTREXVILLE (Vosges, France). Altitude 1000′. Climate severe. Temperature of water 53° F. Season, 20th May to 15th September. Resorted to for affections of the urinary organs.

*Analysis* of the "Pavilion Spring," by Debray:—

| | |
|---|---|
| Bicarbonate of Lime | ·402 grains. |
| Bicarbonate of Magnesia | ·035 „ |
| Bicarbonate of Iron | ·007 „ |
| Bicarbonate of Lithia | ·004 „ |
| Sulphate of Lime | 1·163 „ |
| Sulphate of Soda | ·236 „ |
| Sulphate of Magnesia | ·030 „ |
| Silica | ·015 „ |
| Chloride of Potassium | ·006 „ |
| Chloride of Sodium | ·004 „ |
| Fluoride of Calcium | traces. |
| Arsenic | traces. |
| | 2·304 „ |
| Free Carbonic Acid | ·080 „ |

Imported.

**DRIBURG** (Westphalia). Altitude 583′. Mean temperature 48·5° F. Rather strong chalybeate. Temperature 51° F. Contains 40 grains in 16 oz., chiefly Bicarbonate of Lime, Sulphates of Lime, Magnesia and Soda, and 17 grains of Carbonic Acid; the quantity of Iron not stated.

EILSEN (Northern Germany). Altitude 250′. Sulphureous springs.

Useful in gout, rheumatism, and paralysis.

*Dumesnil's Analysis* in 16 oz. Troy=7680 grs.

| Temperature 59° F. | Georgenbrunnen. | Julianenquelle. | |
|---|---|---|---|
| Sulphate of Soda . . . . . . . . | 5·8233 | 5·0873 | grains. |
| Sulphate of Lime . . . . . . . . | 15·2840 | 17·1933 | ,, |
| Sulphate of Magnesia . . . . . . | 5·0120 | 4·4933 | ,, |
| Carbonate of Lime . . . . . . . . | 2·3333 | 1·5413 | ,, |
| Carbonate of Magnesia . . . . . | ·1620 | ·1866 | ,, |
| Chloride of Magnesium . . . . . | 1·2940 | 2·0500 | ,, |
| Phosphate of Lime . . . . . . . . | ·0067 | ·0080 | ,, |
| Peroxide of Iron . . . . . . . . . | ·0066 | ·0080 | ,, |
| Silica. . . . . . . . . . . . . . | traces | ·0746 | ,, |
| | 30·0051 | 30·6424 | grains. |
| *Gases.* | | | |
| Sulphuretted Hydrogen . . . . . | 1·5740 | 2·096 | c. in. |
| Carbonic Acid . . . . . . . . . | 1·4480 | 2·151 | ,, |
| Nitrogen . . . . . . . . . . . | ·3166 | ·374 | ,, |
| Carburetted Hydrogen. . . . . . | ·0833 | ·110 | ,, |
| Oxygen. . . . . . . . . . . . . | ·0786 | ·080 | ,, |
| | 3·5005 | 4·811 | c. in. |

EMS (on the Lahn, Germany). Altitude 291′. Air soft and balmy. Temperature steady.

Most useful in diseases of mucous membranes and uterine derangements, especially in barrenness, sluggish liver, and irritative dyspepsia.

*Frescnius's Analysis of* 16 oz. Troy=7680 grs.:—

| | Krähnchen. | Kesselbrunnen. | Fürstenbrunnen. | Neuequelle. | |
|---|---|---|---|---|---|
| Temperature | 85° F. | 115° F. | 95° F. | 117° F. | |
| Bicarbonate of Soda . . | 14·8376 | 15·1974 | 15·6031 | 15·93 | grs. |
| Chloride of Sodium. . . | 7·0841 | 7·7705 | 7·5509 | 7·27 | ,, |
| Sulphate of Soda . . . | ·1377 | ·0061 | ·1550 | ·10 | ,, |
| Sulphate of Potash . . . | ·3286 | ·3937 | ·3014 | ·43 | ,, |
| Bicarbonate of Lime . . | 1·7246 | 1·8129 | 1·7760 | 1·78 | ,, |
| Bicarbonate of Magnesia . | 1·5051 | 1·4360 | 1·5357 | 1·54 | ,, |
| Bicarbonate of Iron . . | ·0166 | ·0278 | ·0203 | ·03 | ,, |
| Bicarbonate of Manganese | ·0072 | ·0047 | ·0060 | ·01 | ,, |
| Bicarbonate of Baryta<br>Bicarbonate of Strontia | ·0011 | ·0036 | ·0021 | ·002 | ,,<br>,, |
| Phosphate of Alumina. . | ·0032 | ·0096 | ·0033 | .009 | ,, |
| Silica . . . . . . . . | ·3797 | ·3648 | ·3777 | ·37 | ,, |
| Total | 26·0259 | 27·0272 | 27·3322 | 27·67 | grs. |
| Carbonic Acid . . . . . | 8·3249 | 6·7883 | 6·9275 | 6·52 | c. in. |

Imported.

**ENGHIEN** (Paris). Altitude 52′. A valuable sulphureous water. Has five principal sources, Cotte, Doyeux, Péligot, Boulard, De la Pêcherie. Temperature from 50° to 57° F. The climate is not equal to the Pyrenees. Open from March to October. Imported.

**FACHINGEN** (Nassau, on the Lahn). Altitude 337′.

To correct acid in the stomach, and useful in diseases of kidney and bladder.

*Fresenius's Analysis* of 16 oz. Troy = 7680 grs. Temperature, 50° F.

| | | |
|---|---|---|
| Bicarbonate of Soda | 28·0883 | grains. |
| Bicarbonate of Lime | 2·8960 | „ |
| Bicarbonate of Magnesia | 2·2912 | „ |
| Bicarbonate of Iron | ·1103 | „ |
| Bicarbonate of Strontia | ·0008 | „ |
| Bicarbonate of Lithia | ·0006 | „ |
| Sulphate of Soda | ·1372 | „ |
| Phosphate of Soda | ·0506 | „ |
| Phosphate of Lithia | ·0002 | „ |
| Phosphate of Lime | ·0004 | „ |
| Phosphate of Alumina | ·0003 | „ |
| Phosphate of Silica | ·2610 | „ |
| Fluoride of Calcium | ·0027 | „ |
| Chloride of Sodium | 4·5574 | „ |
| Chloride of Calcium | ·0031 | „ |
| | 38·3918 | grains. |
| *Gases.* | | |
| Carbonic Acid | 32·9750 | c. in. |
| Nitrogen | ·0256 | „ |
| | 33·0006 | c. in. |

Imported.

**FRANZENSBAD** (Bohemia). Altitude 1569′. Mean annual temperature 45° F.

For drinking and for baths. Highly successful in all forms of abdominal plethora, anæmia, and chlorosis. The moor-bath chalybeate for rheumatism and gout.

| *Analysis* of 16 oz. :— | Wiesen-quelle. | Sabe-quelle. | |
|---|---|---|---|
| Temperature, Fahr. | 51° | 52·6° | |
| Carbonate of Iron | ·376 | ·016 | grains. |
| Carbonate of Manganese | ·093 | ·004 | „ |
| Sulphate of Soda | 25·223 | 17·933 | „ |
| Sulphate of Potash | ·1362 | 0 | „ |
| Phosphate of Soda | ·062 | 0 | „ |
| Chloride of Sodium | 9.346 | 9·216 | „ |
| Bromide of Sodium<br>Iodide of Sodium | traces | 0 | |
| Carbonate of Magnesia | 1·190 | ·132 | „ |
| Carbonate of Lithia | ·063 | 0 | „ |
| Carbonate of Lime | 1·291 | 1·607 | „ |
| Carbonate of Strontia | ·049 | ·003 | „ |
| Phosphate of Lime and Alumina | ·007 | ·004 | „ |
| Silica | ·056 | ·333 | „ |
| | 45·108 | 38·568 | grains. |
| Carbonic Acid | 45·107 | 26·89 | c. in. |

| Temperature, Fahr. | Franzensquelle. 52·9° | Kalte-Sprudel. 51° | Louisenquelle 53·9° | |
|---|---|---|---|---|
| Carbonate of Iron | ·23 | ·200 | ·328 | grains. |
| Carbonate of Manganese | ·04 | ·004 | 0 | ,, |
| Chloride of Sodium | 9·23 | 8·600 | 6·766 | ,, |
| Sulphate of Soda | 24·50 | 26·930 | 21·416 | ,, |
| Carbonate of Soda | 5·17 | 7·173 | 5·498 | ,, |
| Carbonate of Lime | 1·82 | 1·600 | 1·600 | ,, |
| Carbonate of Strontia | ·003 | ·001 | 0 | ,, |
| Carbonate of Magnesia | ·67 | ·013 | 0 | ,, |
| Carbonate of Lithia | ·08 | 0 | 0 | ,, |
| Phosphate of Lime and Magnesia | ·032 | ·028 | 0 | ,, |
| Silica | ·47 | ·56 | ·228 | ,, |
| | 42·18 | 44·606 | 35·836 | grains. |
| *Gas.* | | | | |
| Carbonic Acid | 40·84 | 39·4 | 32·53 | c. inches. |

**FRIEDRICHSHALL** (Saxe-Meiningen, near Hildburghausen). Situated in a charming valley. Altitude 920′. Bitter water. Alterative and aperient; used in diseases of the stomach, liver, and urinary organs.

*Liebig's Analysis* in 16 oz. Troy = 7680 grains:—

| | | |
|---|---|---|
| Sulphate of Soda | 46·51 | grains. |
| Sulphate of Magnesia | 39·55 | ,, |
| Chloride of Sodium | 61·10 | ,, |
| Chloride of Magnesium | 30·25 | ,, |
| Bromide of Magnesium | ·37 | ,, |
| Sulphate of Potash | 1·52 | ,, |
| Sulphate of Lime | 10·34 | ,, |
| Carbonate of Lime | ·11 | ,, |
| Carbonate of Magnesia | 1·16 | ,, |
| Silica | ·33 | ,, |
| | 190·25 | grains. |
| Carbonic Acid | 5·32 | c. in. |

Imported.

**GASTEIN** (Austria). Altitude 3051′, surrounded by mountains. Mean summer temperature, 59° F. Specially useful in nervous exhaustion.

Chiefly used for bathing. Season July and August.

*Wolf's Analysis* of 16 oz. Troy = 7680 grs.:—

| | Temperature, from 95° to 118° Fahr. | |
|---|---|---|
| Sulphate of Soda | 1·51 | grains. |
| Chloride of Sodium | ·36 | ,, |
| Carbonate of Lime | ·36 | ,, |
| Silica | ·24 | ,, |
| Carbonate of Soda | ·04 | ,, |
| Phosphate of Alumina | ·04 | ,, |
| Carbonate of Iron | ·05 | ,, |
| Carbonate of Manganese | ·02 | ,, |
| Sulphate of Potash | ·01 | ,, |
| Carbonate of Magnesia | ·02 | ,, |
| Fluoride of Calcium | traces | |
| Strontia | traces | |
| Organic Matter | traces | |
| | 2·68 | grains. |
| *Gases.* | | |
| Nitrogen | 69·112 | per cent. |
| Oxygen | 30·888 | ,, |

**GEROLSTEIN** (Rhenish Prussia). Altitude 1200′.

*Analysis* of 1 litre :—

| | | |
|---|---|---|
| Carbonate of Soda | ·820436 | grammes. |
| „ Lithia | ·001030 | „ |
| „ Lime | ·571430 | „ |
| „ Baryta | ·000089 | „ |
| „ Magnesia | ·456624 | „ |
| „ Iron | ·000316 | „ |
| „ Manganese | ·000167 | „ |
| Sulphate of Potash | ·002868 | „ |
| „ Soda | ·102627 | „ |
| Chloride of Sodium | ·251034 | „ |
| Bromide of Sodium | ·000210 | „ |
| Iodide of Sodium | ·000002 | „ |
| Phosphate of Soda | ·000221 | „ |
| Silicic Acid | ·063204 | „ |
| | 2·290258 | „ |
| Carbonic Acid in combination with Carbonates as Bicarbonates. | ·831988 | „ |

Imported and drunk as a table water.

**HOMBURG** (Central Germany). Altitude 600′. Air pure and bracing.

The springs are laxative, slightly tonic, and useful in plethora, dyspepsia, hysteria, hypochondria, etc. Source Louis, discovered in 1855, contains iron and sulphur, 32 grains of salts, and 38 cubic inches of carbonic acid. The water is also used for baths. Ludwigs-brunnen is a pleasant drinking water. Both the Kaiser-brunnen and the Stahl-brunnen have a chalybeate taste. Open all the year. Season, May to September.

*Liebig and Hofmann's Analysis* of 16 oz. Troy = 7680 grs. :—

| | Elizabeth-brunnen. | Kaiser-brunnen. | Ludwigs-brunnen. | Stahl-brunnen. | |
|---|---|---|---|---|---|
| Temperature, Fahr. | 50° | 52·25° | 53·3° | 50° | |
| Chloride of Sodium | 79·15 | 104·94 | 47·96 | 79·86 | grs. |
| Chloride of Potassium | 0 | ·28 | 1·71 | ·18 | „ |
| Chloride of Magnesium | 7·79 | 8·52 | 3·06 | 5·33 | „ |
| Chloride of Calcium | 0 | 17·50 | 7·28 | 10·67 | „ |
| Carbonate of Iron | ·46 | ·53 | ·42 | ·94 | „ |
| Sulphate of Lime | 0 | ·17 | ·15 | ·15 | „ |
| Carbonate of Lime | 10·99 | ·68 | 5·74 | 7·53 | „ |
| Carbonate of Magnesia | 2·01 | 0 | ·10 | 0 | „ |
| Sulphate of Soda | ·38 | 0 | 0 | 0 | „ |
| Silica | ·32 | ·09 | ·20 | ·31 | „ |
| | 108·87 | 132·71 | 66·63 | 104·97 | grs. |
| Free Carbonic Acid | 48·64 | 109·16 | 43·59 | 46·91 | c. in. |

Imported. Also the Salt evaporated to dryness imported.

**HUNYADI-JANOS** (*See* BUDA-PESTH).

**ISCHIA** (South Italy). Principal spring, Gurgitello. Temperature 158° F. Contains in 16 oz. Troy = 7680 grs., 135 grains, chiefly chloride of sodium, carbonate of soda, and carbonic acid. Serviceable in such cases as hot baths are usually employed, rheumatism, paralysis, skin disease, etc. Season, in the spring and summer. Whey cure.

Saline springs and sand baths. Temperature 108° to 133° F. Patients are immersed in these for rheumatism, gout, palsy, and scrofula.

**ISCHL** (Austria). Altitude 1400′. Air peculiarly soft and refreshing, and is its chief attraction. The brine from the salt-works, when diluted, is used for baths. Season, May to end of September.

**KISSINGEN** (Bavaria). Altitude 800′. Climate mild, dry, and salubrious. Pleasing and healthful place of residence.

The waters are laxative, and used in indigestion, obstructions of the liver, morbid conditions of the kidneys, giving tone to the organs. The season lasts four months, May to September. There is also a Kissingen bitterwasser, which closely resembles Friedrichshall.

*Liebig's Analysis* of 16 oz. Troy = 7680 grs. :—

| | Rakoczi. | Pandur. | Maxbrunnen. |
|---|---|---|---|
| Temperature, Fahr. | 51° | 51° | 49° |
| Chloride of Sodium . . . | 44·71 | 42·39 | 17·52 grains. |
| Chloride of Potassium . . | 2·20 | 1·85 | 1·14 „ |
| Chloride of Lithium . . . | ·15 | ·12 | ·004 „ |
| Chloride of Magnesium . . | 2·33 | 1·62 | ·51 „ |
| Bromide of Sodium . . . | ·06 | ·05 | 0 „ |
| Iodide of Sodium . . . . | traces | traces | 0 „ |
| Nitrate of Soda . . . . | ·07 | ·02 | ·65 „ |
| Sulphate of Magnesia . . | 4·50 | 4·59 | 0 „ |
| Sulphate of Lime . . . . | 2·99 | 2·30 | 1·06 „ |
| Phosphate of Lime . . . | ·04 | ·04 | ·03 „ |
| Carbonate of Lime . . . | 8·14 | 7·79 | 4·62 „ |
| Carbonate of Iron . . . . | ·24 | ·20 | 0 „ |
| Silica . . . . . . . . . | ·09 | ·03 | ·07 „ |
| | 65·70 | 61·30 | 28·10 grains. |
| *Gases.* | | | |
| Carbonic Acid . . . . . | 41·77 | 48·17 | 41·85 c. in. |
| Ammonia . . . . . . . | ·007 | ·029 | 0 „ |

Imported.

**KOSEN** (Saxony, in a valley sheltered from the N. and N.E. winds). Baths. Useful in scrofulosis.

*Analysis* of 16 oz. Troy = 7680 grs. :— Temperature, Fahr. 65°.

| | |
|---|---|
| Chloride of Sodium . . . . . . . . . . . . . . . | 335· grains. |
| Sulphate of Soda . . . . . . . . . . . . . . . | 2·2 „ |
| Sulphate of Potash . . . . . . . . . . . . . . | 2·4 „ |
| Sulphate of Lime . . . . . . . . . . . . . . . | 33·5 „ |
| Carbonate of Lime . . . . . . . . . . . . . . | 1·0 „ |
| Sulphate of Magnesia . . . . . . . . . . . . . | 7·9 „ |
| Oxide of Iron . . . . . . . . . . . . . . . . | 0·1 „ |
| | 382·1 grains. |

**KŒNIGSDORFF-JASTRZEMB** (Upper Silesia). Not much known. Drunk for glandular enlargements.

*Analysis* of 16 oz. Troy = 7680 grs. :—

| | |
|---|---|
| Chloride of Sodium . . . . . . . . . . . . . . . | 87·9 grains. |
| Chloride of Potassium . . . . . . . . . . . . . | 0·5 „ |
| Chloride of Calcium . . . . . . . . . . . . . . | 4·25 „ |
| Chloride of Magnesium . . . . . . . . . . . . . | 2·6 „ |
| Iodide of Magnesium . . . . . . . . . . . . . . | ·04 „ |
| Bromide of Magnesium . . . . . . . . . . . . . | ·22 „ |
| Carbonate of Lime . . . . . . . . . . . . . . . | ·33 „ |
| Carbonate of Magnesia . . . . . . . . . . . . . | ·01 „ |
| Carbonate of Iron . . . . . . . . . . . . . . . | ·03 „ |
| Sulphate of Lime . . . . . . . . . . . . . . . | ·08 „ |
| | 95·96 grains. |

**KRANKENHEIL** (Bavaria). Altitude 2467′. Climate pure, bracing, and mild.

Useful in scrofulous diseases of the skin.

*Analysis* of 16 oz. Troy = 7680 grs. :—

| | Johann-Georgen-quelle. | Bernhard-quelle. | Anna-quelle. | |
|---|---|---|---|---|
| Sulphate of Potash . . . . | ·09 | ·07 | ·15 | grains. |
| Sulphate of Soda . . . . . | ·09 | ·03 | 2·25 | „ |
| Chloride of Sodium . . . . | 1·79 | 2·27 | ·23 | „ |
| Iodide of Sodium . . . . . | ·01 | ·01 | — | „ |
| Bicarbonate of Soda . . . . | 2·48 | 2·56 | 1·49 | „ |
| Bicarbonate of Lime . . . . | ·70 | ·78 | 1·91 | „ |
| Bicarbonate of Magnesia . . | ·22 | ·22 | — | „ |
| Bicarbonate of Iron . . . . | — | — | — | „ |
| Bicarbonate of Manganese . . | — | — | — | „ |
| Silicate of Alumina . . . . | ·02 | ·01 | 1·84 | „ |
| Silicic Acid . . . . . . . | ·06 | ·07 | ·03 | „ |
| | 5·50 | 5·07 | 7·98 | grains. |
| *Gases.* | | | | |
| Free Carbonic Acid . . . . | ·32 | ·23 | ·63 | c. in. |
| Sulphuretted Hydrogen . . . | ·05 | ·07 | ·23 | „ |

**KREUZNACH** (Rhenish Prussia). Altitude 285′. Climate warm, clear, and dry.

Kreuznach Salt: the Mother Lye of Kreuznach, which remains after the salt has crystallized out, contains 2484 grains of solids in the 16 oz.

A strongly iodized water, powerfully tonic and stimulant to the lymphatic system, used for constitutional syphilis, diseases of the skin, rheumatism, paralysis, scrofula, tuberculosis, and leucorrhœa; used also for baths. Season from June to September.

*Analysis* of 16 oz. Troy = 7680 grs. :—

| | Elisen-quelle. | Oranien-quelle. | Brine-Spring. | |
|---|---|---|---|---|
| Temperature, Fahr. | 54·5° | 54·5° | | |
| Chloride of Sodium . . . . | 72·883 | 108·705 | 1311·89 | grains. |
| Chloride of Calcium . . . . | 13·389 | 22·749 | 241·00 | „ |
| Chloride of Magnesium . . . | 4·071 | 0 | 73·22 | „ |
| Chloride of Potassium . . . | ·624 | ·460 | 11·23 | „ |
| Chloride of Lithium . . . . | ·613 | 0 | 0 | „ |
| Bromide of Magnesium . . . | ·278 | 1·780 | 5·00 | „ |
| Iodide of Magnesium . . . | ·035 | ·012 | ·63 | „ |
| Carbonate of Lime . . . . . | 1·693 | ·255 | 0 | „ |
| Carbonate of Magnesia . . . | ·106 | ·130 | 0 | „ |
| Carbonate of Iron . . . . . | 0 | ·356 | 0 | „ |
| Silica . . . . . . . . . . | ·129 | ·999 | 0 | „ |
| Phosphate of Alumina . . . | ·025 | ·095 | 0 | „ |
| | 93·846 | 135·541 | 1642·97 | grains. |

The water, the salt, and the brine are all imported.

**KRONTHAL** (Nassau). Altitude 512′. In a valley open to the south. Climate very mild.

Resorted to by persons suffering from bronchitis or affections of the lungs.

*Löwe's Analysis* of 16 oz. Troy = 7680 grs. :—

| | Stahlquelle. | Wilhelmsquelle. |
|---|---|---|
| **Temperature, Fahr.** | 57° | 61° |
| Chloride of Sodium | 22·27 | 27·20 grains. |
| Chloride of Potassium | ·77 | ·67 ,, |
| Chloride of Ammonium | ·07 | ·04 ,, |
| Chloride of Calcium | ·07 | ·16 ,, |
| Carbonate of Lime | 4·17 | 5·10 ,, |
| Sulphate of Lime | ·21 | ·23 ,, |
| Carbonate of Magnesia | ·72 | ·72 ,, |
| Carbonate of Iron | ·05 | ·10 ,, |
| Carbonate of Manganese | ·02 | ·01 ,, |
| Silica | ·66 | ·55 ,, |
| Organic Matter | ·11 | ·01 ,, |
| | 29·16 | 35·26 grains. |
| Carbonic Acid | 40·0 | 33·0 c. in. |

LABASSÈRE (Hautes-Pyrénées). Altitude 1800′.
Drunk for bronchial and laryngeal catarrh.

Containing 3·68 grains of solids in 16 oz. Troy = 7680 grs., viz. :—
Temperature, 54°—57° Fahr.

| | |
|---|---|
| Sulphuret of Sodium | ·35 grains. |
| Chloride of Sodium | 1·58 ,, |
| Chloride of Potassium | ·02 ,, |
| Carbonate of Soda | ·17 ,, |
| Silicate of Lime | ·33 ,, |
| Silicate of Magnesia | ·07 ,, |
| Alum (in excess) | ·01 ,, |
| Iodine | traces. |
| Organic Matter | 1·11 ,, |

LANDECK (Prussian Silesia). Altitude 1398′. Climate bracing.

Vapour inhaled for bronchial catarrh. Resembles in purity Buxton and Clifton. There are moor-baths for rheumatism, etc.

*Fischer's Analysis* of 16 oz. Troy = 7680 grs. :—

| | Wiesenquelle. 81° F. | Georgenbrunnen. 83° F. |
|---|---|---|
| Sulphate of Soda | ·542 | ·248 grain. |
| Bicarbonate of Soda | ·545 | 0 ,, |
| Chloride of Potassium | 0 | ·165 ,, |
| Chloride of Sodium | ·005 | 0 ,, |
| Chloride of Calcium | ·064 | 0 ,, |
| Crenate of Soda | 0 | ·286 ,, |
| Sulphate of Lime | 0 | ·008 ,, |
| Carbonate of Lime | ·075 | ·081 ,, |
| Carbonate of Magnesia | ·005 | ·009 ,, |
| Phosphate of Alumina, Iron, and Manganese | 0 | ·012 ,, |
| Silica | ·327 | ·271 ,, |
| | 1·563 | 1·122 grain. |
| *Gases.* | | |
| Sulphuretted Hydrogen | ·015 | traces c. in. |
| Carbonic Acid | ·172 | ·26 |
| Nitrogen | 0 | ·62 |

LANGENBRÜCKEN (Baden). Altitude 440′. In a valley, with luxuriant foliage. Climate mild. Season, spring to autumn.

Useful in chronic catarrh of the bladder, rheumatism, and bronchial irritation.

**Trinkquelle.** Temperature, 52° Fahr. Contains 3¾ grains of solids in 16 oz. Troy = 7680 grs. viz. :—

| | |
|---|---|
| Sulphate of Soda | ·25 grains. |
| Sulphate of Lime | ·5 ,, |
| Sulphate of Potash | ·15 ,, |
| Chloride of Sodium | ·08 ,, |
| Carbonate of Lime | 2·12 ,, |
| Carbonate of Magnesia | ·35 ,, |
| Carbonate of Iron | ·07 ,, |
| Silica | ·01 ,, |

*Gases.*

| | |
|---|---|
| Sulphuretted Hydrogen | 0·10 c. in. |
| Carbonic Acid | 27·98 ,, |

**Waldquelle.** Temperature, 57° F. Contains 11¾ grains of solids in 16 oz. Troy = 7680 grs. viz. :—

| | |
|---|---|
| Sulphate of Soda | 1·63 grains. |
| Sulphate of Magnesia | 3·88 ,, |
| Sulphate of Lime | 2·41 ,, |
| Phosphate of Lime | ·16 ,, |
| Sulphate of Potash | ·15 ,, |
| Sulphuret of Calcium | ·14 ,, |
| Chloride of Potassium | ·10 ,, |
| Carbonate of Lime | 1·81 ,, |
| Carbonate of Magnesia | 1·84 ,, |
| Sulphuret of Iron | ·03 ,, |
| Alumina | ·03 ,, |
| Silica | ·13 ,, |

*Gases.*

| | |
|---|---|
| Sulphuretted Hydrogen | ·15 c. in. |
| Carbonic Acid | 3·09 ,, |

**LEUK** (Switzerland). Altitude, 4275′, at the foot of the Gemmi. Climate rough and bracing.

Both sexes, in suitable dresses, promenade in these baths. They are useful in skin diseases, chronic swellings of the glands, in catarrh, and have also a diuretic action.

*Brunner's Analysis* of 16 oz. Troy = 7680 grs., of the Lorenzquelle :—

Temperature, 124° F.

| | |
|---|---|
| Sulphate of Lime | 12·712 grains. |
| Sulphate of Magnesia | 1·991 ,, |
| Sulphate of Soda | ·509 ,, |
| Sulphate of Strontia | ·031 ,, |
| Chloride of Sodium | ·055 ,, |
| Chloride of Potassium | ·02 ,, |
| Chloride of Magnesium | ·027 ,, |
| Carbonate of Lime | .357 ,, |
| Carbonate of Magnesia | ·002 ,, |
| Carbonate of Iron | ·024 ,, |
| Silica | ·102 ,, |
| | 15·830 grains. |

*Gases.*

| | |
|---|---|
| Carbonic Acid | ·267 c. in. |
| Oxygen | ·192 ,, |
| Nitrogen | ·347 ,, |

LIPPIK (Slavonia).

Useful in hysteria.

Kleinbadquelle contains 20 grains of solids in 16 oz. Troy = 7680 grs., viz.:—

Temperature 111° F.

| | |
|---|---|
| Sulphate of Soda | 5·25 grains. |
| Chloride of Sodium | 4·8 ,, |
| Chloride of Calcium | ·75 ,, |
| Iodide of Calcium | ·2 ,, |
| Carbonate of Soda | 9·5 ,, |
| Carbonate of Magnesia | ·75 ,, |
| Carbonate of Lime | 1·33 ,, |
| Phosphate of Alumina | ·02 ,, |
| Silica | ·08 ,, |
| *Gases.* | |
| Carbonic Acid | 28·5 per cent. |
| Nitrogen | 71·4 ,, |

LIPPSPRINGE (Prussian Westphalia). Altitude 378′, having beautiful walks for exercise. Climate mild, calming, and equable.

Useful in bronchial irritation and incipient tuberculosis. Season, June to August.

Arminiusquelle, in 16 oz. Troy = 7680 grs. are:—

Temperature 70° F.

| | |
|---|---|
| Sulphate of Lime | 4·25 grains. |
| Carbonate of Lime | 5·27 ,, |
| Sulphate of Soda | 5·20 ,, |
| Bicarbonate of Soda | 1·60 ,, |
| Sulphate of Magnesia | ·80 ,, |
| Carbonate of Magnesia | ·60 ,, |
| Carbonate of Iron | ·14 ,, |
| Chloride of Sodium | ·86 ,, |
| Chloride of Magnesium | ·80 ,, |
| Iodides | traces. |
| | 19·52 grains. |
| *Gases.* | |
| Carbonic Acid | 16·17 c. in. |
| Nitrogen | 4·46 ,, |
| Oxygen | ·55 ,, |
| | 21·12 c. in. |

LUCCA (Central Italy). Situate on the slope of a hill, surrounded with shady trees. Climate warm.

Employed externally and internally for skin diseases and chronic rheumatism. Season, June, July, and August.

*Giulii's Analysis* of 16 oz. Troy = 7680 grs. of thermal spring:—

Temperature, 116° F.

| | |
|---|---|
| Sulphate of Lime | 5·82 grains. |
| Carbonate of Lime | ·39 ,, |
| Carbonate of Magnesia | ·06 ,, |
| Chloride of Sodium | 1·28 ,, |
| Chloride of Magnesium | ·32 ,, |
| Alumina | ·32 ,, |
| Sulphate of Magnesia | 1·18 ,, |
| | 9·37 grains. |

LUHATSCHOWITZ (Moravia). Altitude 1600′. Climate mild but moist.

Useful in chronic bronchial, gastric, uterine, and vaginal catarrh, especially if combined with scrofulosis; in congested liver and hemorrhoids, arising from sedentary habits.

| | Vincenz-brunnen. | Amand-brunnen. | Johann-brunnen. | Luisen-quelle. | Bade-wasser. | |
|---|---|---|---|---|---|---|
| Temperature, Fahr. | 47·75° | 45 7° | 45·7° | 48·6° | | |
| Chloride of Potassium . . | 1·79 | 1·59 | 2·14 | 1·61 | 1·85 | grains. |
| Chloride of Sodium . . . | 23·35 | 25·75 | 27·88 | 33·47 | 20·87 | ,, |
| Bromide of Sodium . . . | ·25 | ·10 | ·07 | ·08 | ·11 | ,, |
| Iodide of Sodium . . . | ·13 | ·12 | ·17 | ·18 | ·35 | ,, |
| Carbonate of Soda . . . | 23·26 | 36·03 | 44·21 | 43·21 | 24·13 | ,, |
| Carbonate of Lithia . . | 0 | ·01 | ·01 | ·01 | 0 | ,, |
| Carbonate of Magnesia . | ·42 | ·56 | ·55 | ·51 | ·42 | ,, |
| Carbonate of Baryta . . | ·07 | ·06 | ·04 | ·06 | 0 | ,, |
| Carbonate of Lime . . . | 4·63 | 4·81 | 4·89 | 4·40 | 4·79 | ,, |
| Carbonate of Strontia . . | ·09 | ·11 | ·07 | ·12 | 0 | ,, |
| Carbonate of Iron . . . | ·11 | ·13 | ·09 | ·18 | ·15 | ,, |
| Silica . . . . . . . . | ·39 | ·10 | ·41 | ·47 | ·14 | ,, |
| | 54·85 | 69·5 | 80·7 | 84·4 | 59·7 | grains. |
| Carbonic Acid . . . . | 50· | 29· | 16· | 27·6 | 28· | c. in. |

MARIENBAD (Bohemia). Altitude 1900′. Air dry and pure. Season, May to September.

Springs are drunk as laxatives, and are useful in abdominal enlargement, gravel, gout, and derangement of the digestive organs. Mud-baths are applied to stimulate the skin, and to remove glandular swellings.

In 16 oz. Troy = 7680 grs. :—

| | Kreuz-brunnen. | Ferdinand-brunnen. | Wald-quelle. | Wiesen-quelle. | Marien-quelle. | |
|---|---|---|---|---|---|---|
| Temperature, Fahr. | 53·3° | | 48·25° | 52°—54° | | |
| Sulphate of Soda . . . | 36.269 | 38·766 | 5·228 | ·883 | ·353 | grs. |
| Bicarbonate of Soda . . | 12·394 | 13·999 | 5·107 | ·704 | 0 | ,, |
| Chloride of Sodium . . | 11·166 | 15·397 | 2·116 | ·369 | ·048 | ,, |
| Sulphate of Potash . . | ·449 | ·499 | 1·495 | 0 | 0 | ,, |
| Bicarbonate of Lithia . | ·077 | ·110 | ·009 | 0 | 0 | ,, |
| Bicarbonate of Lime . . | 6·630 | 6·021 | 2·725 | 6·516 | ·436 | ,, |
| Bicarbonate of Strontia . | ·017 | ·008 | 0 | 0 | 0 | ,, |
| Bicarbonate of Magnesia . | 5·399 | 5·299 | 0 | 4·373 | ·061 | ,, |
| Bicarbonate of Iron . . | ·482 | ·653 | ·187 | ·373 | ·035 | ,, |
| Bicarbonate of Manganese | ·053 | ·166 | ·035 | ·161 | 0 | ,, |
| Phosphate of Alumina . | ·054 | ·014 | ·011 | 0 | 0 | ,, |
| Phosphate of Lime . . . | ·018 | ·015 | 0 | 0 | 0 | ,, |
| Silica . . . . . . . . | ·079 | ·741 | ·507 | ·691 | ·189 | ,, |
| | 73·736 | 81·515 | 20·091 | 14·070 | 1·197 | grs. |
| Carbonic Acid . . . . | 7·424 | 14·800 | 13·509 | 12·828 | 9·056 | c. in. |

Imported.

| | Carolinen-brunnen. | Ambrosius-brunnen. | |
|---|---|---|---|
| Temperature, Fahr. | 50° | 50° | |
| Sulphate of Soda . . . . . . . . | 2·79 | 1·86 | grains. |
| Chloride of Sodium . . . . . . . . | ·82 | 1·64 | ,, |
| Carbonate of Soda . . . . . . . . | ·20 | 1·66 | ,, |
| Carbonate of Lime . . . . . . . . | 3·66 | 2·89 | ,, |
| Carbonate of Magnesia . . . . . . | 3·94 | 2·72 | ,, |
| Carbonate of Iron . . . . . . . . | ·44 | ·34 | ,, |
| Silica . . . . . . . . . . . . | ·46 | ·48 | ,, |
| Extractive Substance . . . . . . . | ·38 | 0 | ,, |
| Carbonic Acid . . . . . . . . . . | 15·43 | 12·9 | c. in. |

**MEINBERG** (Germany). Altitude 634′. Situated in a charming fertile plain.

These waters are generally tonic, and good in facial neuralgia, relaxed condition of system, whether cutaneous or otherwise.

In 16 oz. Troy = 7680 grs. are contained as follows:—

| | Trink-quelle. | Neu-brunnen. | Quelle im Stern. | Schwefel-quelle. | Kochsalz-quelle. | Acidulous Spring. | |
|---|---|---|---|---|---|---|---|
| Temperature. | | | | 61° F | | | |
| Sulphate of Soda . . . | 1·15 | 4·51 | 1·34 | 5·84 | 11·01 | 0 | grs. |
| Sulphate of Magnesia . | 1·14 | 2·52 | 3·67 | 1·73 | 0 | 0·04 | „ |
| Sulphate of Lime . . | 0·28 | 3·45 | 15·16 | 8·33 | 13·46 | 0·18 | „ |
| Chloride of Sodium . . | 0 | 0 | 0 | 0 | 40·95 | 0·07 | „ |
| Chloride of Magnesia . | 0·81 | 0·98 | 0·24 | 1·03 | 6·31 | 0·14 | „ |
| Carbonate of Lime . . | 1·45 | 2·65 | 1·17 | 2·14 | 6·03 | 5·02 | „ |
| Carbonate of Magnesia . | 0·15 | 0·24 | 0·17 | 0·17 | 0·51 | 2·04 | „ |
| Carbonate of Iron . . | 0·08 | 0·07 | 0·01 | 0·008 | 0·07 | 0·005 | „ |
| Silica. . . . . . . | 0·06 | 0.25 | 0·08 | 0·12 | 0·05 | 0·05 | „ |
| Extractive Substance . | 0.57 | 0 | 0 | 0 | 0 | 0 | „ |
| | 5·96 | 14·73 | 23·36 | 19·48 | 73·44 | 7·57 | „ |
| *Gases.* | | | | | | | |
| Carbonic Acid . . . | 34·36 | 0 | 1·83 | 2·12 | 9·74 | 18·49 | c. in. |
| Sulphuretted Hydrogen | 0 | 0 | 0 | 0·55 | 0 | 0 | „ |
| Nitrogen . . . . . | 0·14 | 0 | 0 | 0 | 0 | 0 | „ |

**MERGENTHEIM** (Würtemburg). Altitude 591′. Charming situation. Climate mild. Mean annual temperature 51° F., mean summer temperature 64° F.

The concentrated bitter-water contains 235 grains in the 16 oz. Troy = 7680 grs. The water is used internally and externally in biliary obstructions, hemorrhoids, and lithiasis.

The "Quelle im Carlsbad" spring contains about 107 grains of solids in 16 oz. Troy = 7680 grs. viz.:—

| | | |
|---|---|---|
| Chloride of Sodium . . . . . . . . . . . . . . | 51·25 | grains. |
| Chloride of Potassium . . . . . . . . . . . . . | ·78 | „ |
| Chloride of Lithium . . . . . . . . . . . . . | ·01 | „ |
| Bromide of Sodium . . . . . . . . . . . . . . | ·07 | „ |
| Sulphate of Soda . . . . . . . . . . . . . . | 21·89 | „ |
| Sulphate of Magnesia . . . . . . . . . . . . . | 15·88 | „ |
| Sulphate of Lime . . . . . . . . . . . . . . | 9·86 | „ |
| Carbonate of Magnesia . . . . . . . . . . . . | 1·40 | „ |
| Carbonate of Lime . . . . . . . . . . . . . . | 5·45 | „ |
| Carbonate of Iron . . . . . . . . . . . . . . | ·05 | „ |
| Silica . . . . . . . . . . . . . . . . . | ·45 | „ |
| | 107·16 | grains. |
| *Gases.* | | |
| Carbonic Acid . . . . . . . . . . . . . . . | 7·5 | c. in. |
| Nitrogen . . . . . . . . . . . . . . . . | 18· | „ |

**MONDORF** (Luxemberg). Altitude 2278′. Surrounded by beautiful shady walks.

Extremely useful in hyperæmic conditions of the mucous membrane of the respiratory or intestinal functions, especially in leuco-phlegmatic anæmic individuals.

There is an artesian well here, 2278 feet deep, and the water out of it is 108·5° F.

*Kirchhoff's Analysis* of 16 oz. Troy = 7680 grs. :—

| Temperature, 77° Fahr. | |
|---|---|
| Chloride of Sodium | 66·98 grains. |
| Chloride of Calcium | 24·31 „ |
| Chloride of Potassium | 1·58 „ |
| Chloride of Magnesium | 3·25 „ |
| Bromide of Magnesium | ·76 „ |
| Sulphate of Lime | 12·61 „ |
| Carbonate of Magnesia | ·05 „ |
| Carbonate of Iron | ·22 „ |
| Silica | ·05 „ |
| Arsenic Acid | ·001 „ |
| | 109·911 grains. |
| *Gases.* | |
| Free Carbonic Acid | 1·06 c. in. |
| Nitrogen | ·47 „ |

NENNDORF (Prussian Westphalia). Environs charming.

Used for drinking and for baths, to increase the tone of the skin. Gas, douche, and mud baths are employed for gout and rheumatism, etc. Brine baths are also employed. Season, June to September.

In 16 oz. Troy = 7680 grs. :—

| Temperature, 52° F. | Quelle uncer dem Gewölbe. | Trink-brunnen. | Badequelle. | Sool of Rodenberg. |
|---|---|---|---|---|
| Sulphate of Soda | 5·22 | 4·91 | 1·11 | 10·81 grs. |
| Sulphate of Magnesia | 2·83 | 2·54 | 1·89 | 10·01 „ |
| Sulphate of Lime | 7·15 | 6·31 | 5·56 | 14·82 „ |
| Sulphate of Potash | 0 | 0 | 0 | 0·10 „ |
| Chloride of Sodium | 0 | 0 | 0 | 49·84 „ |
| Chloride of Magnesium | 1·63 | 1·62 | 0·42 | 10·01 „ |
| Chloride of Lime | 4·30 | 4·51 | 3·18 | 4·61 „ |
| Silica | 0·05 | 0·06 | 0 | 0·20 „ |
| | 21·4 | 20·7 | 12·19 | 90·0 grs. |
| *Gases.* | | | | |
| Carbonic Acid | 5·2 | 4·32 | 2·75 | 0·14 c. in. |
| Sulphuretted Hydrogen | 1·21 | 1·20 | 0·61 | 0 „ |

NEUENAHR (Rhenish Prussia). Altitude 225′. Scenery picturesque and romantic. Climate mild.

Good for gout and rheumatism, scrofula, emphysema of the lungs, bronchial catarrh, uric acid diathesis, and all diseases of the mucous membrane.

Contents in 16 oz. Troy = 7680 grains :—

| | Augusten-quelle. | Mohr-Marien-sprudel. | Bisch. Apollinaris-brunnen. | Victoria-quelle. |
|---|---|---|---|---|
| Temperature, Fahr. | 90° | 102° | 70° | |
| Carbonate of Soda | 5·99 | 5·62 | 9·65 | 10·80 grs. |
| Carbonate of Magnesia | 1·77 | 2·68 | 3·39 | 3·74 „ |
| Carbonate of Lime | 1·68 | 1·61 | ·45 | 3·30 „ |
| Chloride of Sodium | ·71 | ·69 | 3·57 | 0·91 „ |
| Sulphate of Soda | ·58 | ·76 | 2·30 | 0·73 „ |
| Oxide of Iron | ·04 | 0·06 | 0·15 | 0·10 „ |
| Alumina | ·13 | | | |
| Silica | ·17 | 0·19 | 0·06 | 0·25 „ |
| | 11·11 | 11·66 | 19·59 | 19·83 grs. |
| Carbonic Acid | 24·73 | 22·52 | 47·04 | 12·86 c. in. |

**Apollinaris is imported for drinking as a table water.**

**OREZZA** (Corsica). Air warm. Temperature, 59° F.

Is a kind of ferruginous Seltzer Water, very agreeable to drink. It is drunk with pleasure and with benefit for indigestion, want of appetite, and general debility.

*Analysis* of 1000 grammes :—

| | |
|---|---|
| Carbonate of Lime | ·602 grammes. |
| Carbonate of Magnesia | ·074 „ |
| Carbonate of Protoxide of Iron | ·128 „ |
| Sulphate of Lime | ·021 „ |
| Chloride of Potash<br>Chloride of Soda | ·014 „ |
| Aluminium | ·006 „ |
| Silicic Acid | ·004 „ |
| | ·849 grammes. |
| Free Carbonic Acid | 1·248 litres. |

Imported.

**OTTILIENQUELLE** (Paderborn, Westphalia).

For incipient tuberculosis, great emaciation, etc.; in short, they are both tonic and restorative.

*Analysis* of 16 oz. Troy = 7680 grains :—

| | |
|---|---|
| Carbonate of Lime | 2·5 grains. |
| Carbonate of Iron | ·05 „ |
| Chloride of Sodium | 6·75 „ |
| Sulphate of Lime | ·5 „ |
| Chloride of Calcium | ·5 „ |
| Chloride of Magnesium | ·25 „ |
| Iodine and Bromine | traces. |
| | 10·55 grains. |
| *Gases.* | |
| Carbonic Acid | 2·34 c. in. |
| Nitrogen | 8·98 „ |
| Oxygen | 1·17 „ |

MARIENQUELLE (in the neighbourhood), a chalybeate, contains 4¾ grains of solids. Amongst them—

| | |
|---|---|
| Carbonate of Lime | 1·75 grains. |
| Bicarbonate of Iron | ·45 „ |

**PFAFFERS** (Switzerland), altitude 2108′, and **RAGATZ**, altitude 1604′, which has the same water conveyed to it.

Pfaffers is situated in a ravine, and is the most valued; Ragatz is in an open country, with purer air. They are chiefly valued for the warmth of their springs. Season, June to September.

*Capeller's Analysis* of 16 oz. Troy = 7680 grains :—

Temperature, 100° F.

| | |
|---|---|
| Carbonate of Magnesia | ·87 grains. |
| Carbonate of Lime | ·32 „ |
| Sulphate of Soda | ·62 „ |
| Sulphate of Lime | ·37 „ |
| Chloride of Sodium | ·21 „ |
| Chloride of Magnesium | ·16 „ |
| *Gases.* | 2·55 grains. |
| Oxygen | 1.3 c. in. |
| Nitrogen | 3·7 „ |
| Carbonic Acid | 4·15 „ |

**PLOMBIÈRES** (Vosges, France). Altitude 1310′. Air bracing and pure, subject to change of temperature.

Chiefly used as baths, and Dr. Hebra's beds are used to keep patients immersed for days together; most suitable for gout, rheumatism, spinal, and female complaints. There are, also, cool chalybeate springs for drinking. Often visited by the late Emperor Napoleon III.

*Analysis* of 16 oz. Troy=7680 grs.:—

| Temperature, from 80° to 159° F. | Bain des Dames. | Bain Romain. | |
|---|---|---|---|
| Silicate of Soda . . . . . . . . | ·6257 | ·5278 | grain. |
| Silicate of Potash . . . . . . . | ·0080 | 0 | ,, |
| Silicate of Lime and Magnesia . . | ·1530 | ·052 | ,, |
| Chloride of Sodium . . . . . | ·2754 | ·2290 | ,, |
| Chloride of Potassium . . . . | | | |
| Chloride of Calcium . . . . . | | | |
| Sulphate of Soda . . . . . . . . | ·6273 | ·3901 | ,, |
| Arseniate of Soda . . . . . . . . | ·0053 | 0 | ,, |
| Silica . . . . . . . . . . . . | ·0887 | ·3213 | ,, |
| Alumina . . . . . . . . . . . | ·0760 | ·1980 | ,, |
| Nitrogenous organic matter . . . | ·1530 | 0 | ,, |
| | 2·0024 | 1·6759 | grains. |

Imported.

**POUGUES** (Loire, France). Altitude 780′.

*Analysis* of "St. Leger" Spring:—

| | | |
|---|---|---|
| Bicarbonate of Lime . . . . . . . . . . . . | 1·3269 | grammes. |
| Bicarbonate of Magnesia . . . . . . . . . . | ·9762 | ,, |
| Bicarbonate of Soda with traces of Potash . . . . | ·6362 | ,, |
| Bicarbonate of Iron . . . . . . . . . . . . | ·0206 | ,, |
| Sulphate of Soda . . . . . . . . . . . . . | ·2700 | ,, |
| Sulphate of Lime . . . . . . . . . . . . . | ·1900 | ,, |
| Chloride of Magnesium . . . . . . . . . . | ·3500 | ,, |
| Silicic Acid and Alumina . . . . . . . . . . | ·0350 | ,, |
| Glairin . . . . . . . . . . . . . . . . . | ·0300 | ,, |
| | 3·8349 | grammes. |

**PULLNA** (Bohemia).

A bitter saline purgative, twice the strength of Seidlitz, useful in obstinate constipation.

*Struve's Analysis* of 16 oz. Troy = 7680 grs.:—

| | | |
|---|---|---|
| Sulphate of Soda . . . . . . . . . . . . . | 123·800 | grains. |
| Sulphate of Potash . . . . . . . . . . . . | 4·800 | ,, |
| Sulphate of Lime . . . . . . . . . . . . . | 2·600 | ,, |
| Carbonate of Lime . . . . . . . . . . . . | ·770 | ,, |
| Sulphate of Magnesia . . . . . . . . . . . | 93·086 | ,, |
| Chloride of Magnesium . . . . . . . . . . | 16·666 | ,, |
| Carbonate of Magnesia . . . . . . . . . . . | 6·406 | ,, |
| Phosphate of Lime . . . . . . . . . . . . | ·003 | ,, |
| Silica . . . . . . . . . . . . . . . . . | ·176 | ,, |
| | 248·307 | grains. |

Carbonic Acid Gas.

Imported.

PYRMONT (Waldeck). Altitude 404′. In a valley; the environs picturesque. Mean annual temperature, 48·5° F.

Chalybeate drinking springs, taste fresh and slightly ferruginous. The saline somewhat bitter; they are highly restorative. There is also a Grotto del Cane here.

*Wigger's Analysis* of 16 oz. Troy = 7680 grs. :—

| Temperature, 51°—54½° F. | Trink-quelle. | Brodel-brunnen. | Augen-quelle. | Neu-brunnen. | Sool-quelle. | Myr. Sal. quelle. | Säur-ling. | |
|---|---|---|---|---|---|---|---|---|
| Sulphate of Lime . . | 7·22 | 6·07 | 4·10 | 0 | 14·58 | 5·51 | ·31 | grs. |
| Sulphate of Magnesia | 2·69 | 5·53 | 4·56 | 3·47 | 2·33 | 0 | ·60 | „ |
| Sulphate of Soda . . | 2·14 | 0 | 1·71 | 7·34 | 5·29 | 12·24 | ·37 | „ |
| Carbonate of Lime . | 5·98 | 4·52 | 3·81 | 7·86 | 2·71 | 6·92 | 1·81 | „ |
| Carbonate of Magnesia | ·32 | ·24 | ·25 | ·96 | ·46 | 0 | ·16 | „ |
| Carbonate of Soda . | 0 | 4·78 | ·84 | 2.62 | 1·49 | 6·23 | ·30 | „ |
| Carbonate of Iron . . | ·49 | ·58 | ·13 | ·75 | ·08 | ·06 | 0 | „ |
| Chloride of Sodium . | 0 | 0 | ·44 | 4·38 | 61·68 | 65·49 | ·01 | „ |
| Chloride of Magnesium | 1·12 | 1·48 | ·45 | ·97 | 6·92 | 12·07 | ·12 | „ |
| Silica . . . . . . . | ·49 | ·25 | ·10 | ·20 | 0 | 0 | 0 | „ |
| *Gases.* | 20·02 | 23·62 | 16·46 | 28·98 | 95·32 | 108·7 | 3·72 | grs. |
| Carbonic Acid . . | 44·52 | 38·51 | 36·28 | 39·28 | 17·46 | 26·19 | 21·84 | c.in. |
| Sulphuretted Hydrogen | 0 | 0 | ·39 | 0 | 0 | 0 | 0 | |

Imported.

RAKOCZI (*See* KISSINGEN), Bavaria.

RECOARO (Venetia). Altitude 1465′. Climate mild and bracing.

Situate at the foot of the Alps. Chiefly resorted to for the mild air and chalybeate springs. Season, May to October.

*Cenedella's Analysis* of 16 oz. Troy = 7680 grs. :—

| | | |
|---|---|---|
| Carbonate of Iron . . . . . . . . . . . . . | ·23 | grains. |
| Carbonate of Lime . . . . . . . . . . . . . . | 5·15 | „ |
| Carbonate of Magnesia . . . . . . . . . . . . | ·47 | „ |
| Carbonate of Soda . . . . . . . . . . . . . . | 0 | „ |
| Sulphate of Magnesia . . . . . . . . . . . . | 5·00 | „ |
| Sulphate of Soda . . . . . . . . . . . . . | ·23 | „ |
| Sulphate of Lime . . . . . . . . . . . . . | 9·5 | „ |
| Chloride of Magnesium . . . . . . . . . . . | ·023 | „ |
| Silica . . . . . . . . . . . . . . . . . | ·319 | „ |
| *Gas.* | 20·78 | grains. |
| Carbonic Acid . . . . . . . . . . . . . . . | 17·99 | c. in. |

REICHENHALL (Upper Bavaria). Altitude 1407′. Mean temperature of spring, 56° F.; of summer, 64° F.: of autumn, 54° F. Climate mild and bracing.

Used only for baths, for scrofula and incipient tuberculosis, and for inhalation. Season, July and August.

Of the nineteen saline springs, the most abundant is

The "EDELQUELLE," which contains in 16 oz. Troy = 7680 grs. :—

| | | |
|---|---|---|
| Chloride of Sodium . . . . . . . . . . . . | 1723·10 | grains. |
| Chloride of Ammonium . . . . . . . . . . | ·19 | „ |
| Chloride of Magnesium . . . . . . . . . . | 13·84 | „ |
| Bromide of Magnesium . . . . . . . . . . | ·23 | „ |
| Sulphate of Soda. . . . . . . . . . . . . | 15·36 | „ |
| Sulphate of Potash . . . . . . . . . . . . | 4·70 | „ |
| Sulphate of Lime . . . . . . . . . . . . | 31·98 | „ |
| Carbonate of Lime . . . . . . . . . . . . | ·07 | „ |
| Carbonate of Magnesia . . . . . . . . . . . | traces. | |
| Oxide of Iron and Alumina . . . . . . . . . | ·06 | „ |
| Silica . . . . . . . . . . . . . . . . | ·08 | „ |
| | 1789·61 | grains. |
| Free Carbonic Acid . . . . . . . . . . . . | traces. | |

**RIPPOLDSAU** (Baden). Altitude 1886′. Air pure, fresh, and bracing.

Tonic resolvent for chlorotic and anæmic patients; also useful in pulmonary catarrh. Season, middle of May to middle of September.

*Bunsen's Analysis* of 16 oz. Troy = 7680 grs. :—

| | Joseph-quelle. | Leopolds-quelle. |
|---|---|---|
| Temperature, Fahr. | 46° | 49° |
| Bicarbonate of Iron | ·395 | ·455 grains. |
| Bicarbonate of Manganese | ·033 | ·078 ,, |
| Bicarbonate of Lime | 12·939 | 14·598 ,, |
| Bicarbonate of Magnesia | ·543 | 2·888 ,, |
| Sulphate of Soda | 9·316 | 6·769 ,, |
| Sulphate of Potash | ·465 | ·271 ,, |
| Sulphate of Lime | ·428 | ·134 ,, |
| Sulphate of Magnesia | 1·866 | ·150 ,, |
| Phosphate of Lime | 0 | ·136 ,, |
| Chloride of Magnesium | ·650 | ·336 ,, |
| Alumina | ·034 | ·120 ,, |
| Silica | ·439 | ·663 ,, |
| Phosphoric Acid<br>Arsenic and organic matter. | traces. | traces. |
| | 26·908 | 26·853 grains. |
| *Gases.* | | |
| Free Carbonic Acid | 14·936 | 15·985 c. in. |
| Nitrogen | ·003 | ·003 ,, |
| Oxygen | 0 | ·003 ,, |

**ROISDORF** (Rhenish Prussia). Altitude 1000′.

Table water.

*Analysis* of 16 oz. Troy = 7680 grs. :—

| | Trink-quelle. | Stahl-quelle. |
|---|---|---|
| Carbonate of Soda | 6·04 | 1·38 grains. |
| Carbonate of Lime | 2·16 | 2·18 ,, |
| Chloride of Sodium | 14·60 | 3·86 ,, |
| Carbonate of Magnesia | 3·06 | 1·03 ,, |
| Carbonate of Protoxide of Iron | ·05 | ·20 ,, |
| Silica | ·12 | ·70 ,, |
| | 29·70 | 10·53 grains. |
| Carbonic Acid | 19 c. in. | |

Imported.

**ROSBACH** (Germany).

*Analysis* of 1 gallon = 70,000 grains :—

| | |
|---|---|
| Chloride of Sodium | 83·0 grains. |
| Carbonate of Lime | 25·7 ,, |
| Carbonate of Magnesia | 12·6 ,, |
| | 121·3 grains. |

Imported and drunk as a table water.

**ROYAT** (Puy-de-Dôme, France). Altitude 1380′.

These are alkaline springs, and are useful in cases of gastro-intestinal dyspepsia, rheumatism, and catarrhal affections of the genito-urinary passages.

*Analysis*:—

| | Eugénie. | Cæsar. | St. Mark. | St. Victor. | |
|---|---|---|---|---|---|
| Bicarbonate of Soda . . . | 1·349 | ·392 | ·8003 | ·8886 | grains. |
| Bicarbonate of Potash . . | ·435 | ·286 | ·1701 | ·8886 | ,, |
| Bicarbonate of Lime . . . | 1·000 | ·686 | ·9696 | 1·0121 | ,, |
| Bicarbonate of Magnesia . | ·677 | ·397 | ·6568 | ·6464 | ,, |
| Bicarbonate of Iron . . . | ·040 | ·025 | ·0230 | ·0560 | ,, |
| Sulphate of Soda . . . . | ·185 | ·115 | ·1463 | ·1656 | ,, |
| Phosphate of Soda . . . | ·018 | ·014 | traces. | traces. | |
| Chloride of Sodium . . . | 1·728 | ·766 | 1·5655 | 1·6497 | ,, |
| Chloride of Lithium . . . | | | ·0350 | ·0350 | ,, |
| Silicic Acid . . . . . . . | ·156 | ·167 | | | |
| Silica . . . . . . . . . | | | ·0945 | ·0950 | ,, |
| | 5·588 | 2·848 | 4·4551 | 5·4370 | grains. |
| Carbonic Acid . . . . . | ·377 | 1·229 | 1·709 | 1·492 | grains. |

Imported.

SAINT-GALMIER (Loire, France). Altitude 1350′.

Useful in dyspepsia.

*Analysis* in 1000 parts of "Badoit" spring:—

| | | |
|---|---|---|
| Bicarbonate of Soda . . . . . . . . . . . . . | ·560 | grains. |
| Bicarbonate of Potash . . . . . . . . . . . . | ·020 | ,, |
| Bicarbonate of Lime . . . . . . . . . . . .<br>Bicarbonate of Magnesia . . . . . . . . . . | 1·440 | ,, |
| Sulphate of Soda . . . . . . . . . . . . .<br>Sulphate of Lime . . . . . . . . . . . . . | ·200 | ,, |
| Silicate of Alumina . . . . . . . . . . . . | ·134 | ,, |
| Chloride of Magnesium . . . . . . . . . . . | ·480 | ,, |
| | 2·834 | grains. |
| Free Carbonic Acid . . . . . . . . . . . . . | 1·25 | volume. |

Imported.

SANKT-MORITZ or SAINT-MAURICE (Upper Engadine, Switzerland). Altitude 5464′. Climate rough; environs romantic. Mean temperature of summer months, 51° F.

Tonic and stimulating, in debility, anæmia, neuralgia, scrofula, and in some conditions of lung disease. Used for drinking and for baths. Season, July and August.

The old spring contains in 16 oz. Troy = 7680 grs.:—

Temperature, Fahr. 42°.

| | | |
|---|---|---|
| Carbonate of Lime . . . . . . . . . . . . . . | 5·5 | grains. |
| Carbonate of Magnesia . . . . . . . . . . . . | 1·0 | ,, |
| Carbonate of Iron . . . . . . . . . . . . . . | ·18 | ,, |
| Carbonate of Manganese . . . . . . . . . . . | ·03 | ,, |
| Carbonate of Soda . . . . . . . . . . . . . . | 1·46 | ,, |
| Sulphate of Soda . . . . . . . . . . . . . . | 2·0 | ,, |
| Chloride of Sodium . . . . . . . . . . . . . | ·29 | ,, |
| Sulphate of Potash . . . . . . . . . . . . . | ·12 | ,, |
| Silica . . . . . . . . . . . . . . . . . . | ·29 | ,, |
| Phosphoric Acid . . . . . . . . . . . . . . | ·03 | ,, |
| Bromine, Iodine, and Fluorine . . . . . . . . | traces. | |
| | 10·90 | grains. |
| Carbonic Acid . . . . . . . . . . . . . . . | 39·5 | c. in. |

Imported.

The new spring contains 13½ grains of solids in 16 oz., viz.:—

More Lime and Magnesia than the old spring, 0·25 grain of Iron, and 40½ cubic inches of Carbonic Acid.

**SCHINZNACH** (Switzerland). Altitude 1060′. Mountainous and picturesque. Climate mild and salubrious.

There is only one spring; it is the most sulphureous of all the Continental waters, and the most frequented. The visitors are chiefly French. The baths are cooled to 90° F.; they are used for skin diseases, diseases of the bones, and local rheumatism.

*Analysis* of 16 oz. Troy = 7680 grs.:—

Temperature, 96° F.

| | |
|---|---|
| Sulphate of Soda | 9·87 grains. |
| Sulphate of Potash | ·68 ,, |
| Sulphate of Lime | 1·20 ,, |
| Chloride of Potassium | 5·48 ,, |
| Chloride of Magnesium | 1·14 ,, |
| Magnesia | ·64 ,, |
| Carbonate of Magnesia | ·03 ,, |
| Carbonate of Lime | 1·09 ,, |
| Oxide of Iron | ·008 ,, |
| Alumina | ·07 ,, |
| Silica | ·09 ,, |
| *Gases.* | |
| Carbonic Acid | 2·38 c. in. |
| Sulphuretted Hydrogen | 1·72 ,, |
| Nitrogen | a trace. |

**SCHLANGENBAD** (Nassau). Altitude 933′. Mean annual temperature, 50° F. Locality romantic. Air mild and bracing. Season, June, July, and August.

The baths have a sedative and a beautifying influence on the skin, rendering it soft and juvenile; highly useful in nervous irritability arising from debility.

*Fresenius's Analysis* of 16 oz. Troy = 7680 grs.:—

| | |
|---|---|
| Sulphate of Potash | 0·091 grains. |
| Chloride of Potassium | 0·004 ,, |
| Chloride of Sodium | 1·325 ,, |
| Phosphate of Soda | 0·004 ,, |
| Carbonate of Potash | 0·079 ,, |
| Carbonate of Lime | 0·250 ,, |
| Carbonate of Magnesia | 0·047 ,, |
| Silica | 0·258 ,, |
| | 2·558 grains. |
| Carbonic Acid | 0·668 grain. |

**SCHWALBACH** (Nassau). Altitude 909′. Climate bracing. Mean season temperature, 64° F.

Resorted to for quiet, and recruiting dilapidated health. Season, June, July, and August.

*Fresenius's Analysis* of 16 oz. Troy = 7680 grs.:—

| | Stahl-brunnen. | Wein-brunnen. | Paulinen-brunnen. | Rosen-brunnen. | |
|---|---|---|---|---|---|
| Temperature, Fahr. | 46°—51° | 49°—50° | 48°—50° | | |
| Bicarbonate Protoxide of Iron | ·643 | ·443 | ·65 | ·91 | grain. |
| Bicarbonate Protoxide of Manganese | ·141 | ·070 | 0 | 0 | ,, |
| Bicarbonate of Soda | ·158 | 1·884 | ·45 | ·35 | ,, |
| Chloride of Sodium | ·052 | ·066 | ·03 | ·32 | ,, |
| Sulphate of Soda | ·061 | ·048 | ·02 | ·8 | ,, |
| Sulphate of Potash | ·029 | ·057 | 0 | 0 | ,, |
| Bicarbonate of Lime | 1·700 | 4·394 | 2·95 | 2·95 | ,, |
| Bicarbonate of Magnesia | 1·630 | 4·467 | 2·75 | ·98 | ,, |
| Silica | ·246 | ·357 | 0 | 0 | ,, |
| | 3·660 | 11·786 | 6·86 | 5·57 | grains. |

| *Gases.* | Stahl-brunnen. | Wein-brunnen. | Paulinen-brunnen. | Rosen-brunnen. |
|---|---|---|---|---|
| Carbonic Acid | 50·27 | 45·6 | 39·5 | ·26 c. in. |
| Sulphuretted Hydrogen | ·003 | ·003 | 0 | 0 „ |

The first two are for drinking, the last two for bathing. The Stahlbrunnen is employed for general torpidity.

Imported.

SEIDLITZ (Bohemia).

*Steinmann's Analysis* of 16 oz. Troy = 7680 grs. :—

| | |
|---|---|
| Sulphate of Magnesia | 79·55 grains. |
| Sulphate of Soda | 17·44 „ |
| Carbonate of Lime | 5·29 „ |
| Carbonate of Magnesia | ·20 „ |
| Carbonate of Strontia | ·009 „ |
| Sulphate of Lime | 4·14 „ |
| Sulphate of Potash | 4·41 „ |
| Chloride of Magnesium | 1·06 „ |
| Carbonate of Protoxide of Iron and Manganese | ·05 „ |
| Silica | ·05 „ |
| Fluoride and Bromide of Magnesium | a trace. |
| | 112·199 grains. |

SELTERS (Nassau). Altitude 800′. Furnishes the well-known *Seltzer-water*.

*Kastner's Analysis* of 16 oz. Troy = 7680 grs. :—

| | Temperature 62° F. |
|---|---|
| Bicarbonate of Soda | 9·7741 grains. |
| Chloride of Sodium | 17·2285 „ |
| Chloride of Potassium | ·2890 „ |
| Sulphate of Soda | ·2615 „ |
| Phosphate of Lime | ·0004 „ |
| Phosphate of Alumina | ·0002 „ |
| Phosphate of Soda | ·2615 „ |
| Fluoride of Calcium | ·0016 „ |
| Bicarbonate of Lime | 2·6678 „ |
| Bicarbonate of Magnesia | 2·5586 „ |
| Bicarbonate of Iron | ·1088 „ |
| Bicarbonate of Manganese | ·0032 „ |
| Bromide of Sodium | ·0002 „ |
| Silica | ·2500 „ |
| | 33·4054 grains. |
| *Gases.* | |
| Carbonic Acid | 30·0100 c. in. |
| Nitrogen | ·0285 „ |
| Oxygen | ·0046 „ |
| | 30·0431 c. in. |

Imported.

SODEN (Nassau). Altitude 437′. Locality charming; air mild; temperature steady.

There are nineteen other springs not in use. In Germany these springs have a great reputation for chest diseases, are employed in atonic gout, scrofula, and diseases peculiar to females.

Analysis of 16 oz. Troy = 7680 grs.:—

| | Milch-brunnen. | Warm-brunnen. | Wilhelms-brunnen. | Sool-brunnen. | |
|---|---|---|---|---|---|
| Temperature, Fahr. | 74° | 70° | 57° | 68° | |
| Chloride of Sodium . . . | 17·68 | 26 13 | 104·10 | 114·40 | grains. |
| Chloride of Potassium . . | ·16 | 1·29 | 2·53 | 3·52 | „ |
| Sulphate of Lime . . . | ·19 | ·25 | ·98 | ·76 | „ |
| Carbonate of Lime . . . | 2·73 | 4·47 | 8·38 | 8·63 | „ |
| Carbonate of Magnesia . . | 1·37 | 2·63 | 1·28 | ·29 | „ |
| Carbonate of Iron . . . | ·16 | ·30 | ·30 | ·60 | „ |
| Alumina . . . . . . . | ·01 | 0 | ·05 | ·88 | „ |
| Silica . . . . . . . . | ·16 | ·23 | ·30 | ·50 | „ |
| | 23·46 | 35·30 | 117·92 | 129·58 | grains. |
| Carbonic Acid . . . . . | 17·0 | 35·9 | 48·9 | 14·0 | c. in. |

**SPA** (Belgium). Altitude 1030′. Sheltered. Air salubrious and bracing, but subject to sudden changes of temperature.

There are seven springs in all.

These chalybeates are highly beneficial in anæmia, debility, and depression of system. Season, August and September.

*Struve's Analysis* of 16 oz. Troy = 7680 grs. of Pouhon:—

Temperature, 52° Fahr.

| | | |
|---|---|---|
| Carbonate of Protoxide of Iron . . . . . . . . . . | ·375 | grains. |
| Carbonate of Protoxide of Manganese . . . . . . . | ·052 | „ |
| Carbonate of Soda . . . . . . . . . . . . . . | ·738 | „ |
| Carbonate of Lime . . . . . . . . . . . . . . | ·986 | „ |
| Carbonate of Magnesia . . . . . . . . . . . . | 1·123 | „ |
| Sulphate of Potash . . . . . . . . . . . . . . | ·079 | „ |
| Sulphate of Soda . . . . . . . . . . . . . . | ·038 | „ |
| Chloride of Sodium . . . . . . . . . . . . . . | ·050 | „ |
| Phosphate of Lime . . . . . . . . . . . . . . | ·013 | „ |
| Phosphate of Alumina . . . . . . . . . . . . . | ·009 | „ |
| Silica . . . . . . . . . . . . . . . . . . | ·499 | „ |
| | 3·962 | grains. |
| Carbonic Acid Gas . . . . . . . . . . . . . . | 21·6 | c. in. |

Imported.

**TARASP** (Switzerland). Lower Engadine. Altitude 4265′. Scenery mountainous and cultivated.

Useful in abnormal obesity, oppressed functions of the glandular and vascular system, gout, rheumatism, and skin diseases, the mountain air contributing largely to invigorate the system. Season, June to September, when the weather is genial and constant. Mean temperature of July, 51° F.

*Dr. Planta's Analysis* of 16 oz. Troy = 7680 grs.:—

| | Grosse-quelle. | | Kleine-quelle. | |
|---|---|---|---|---|
| | Temperature 37° F. | | | |
| Sulphate of Soda . . . . . . | 16·547 | grains. | 16·417 | grains. |
| Carbonate of Soda . . . . . . | 27·229 | „ | 28·535 | „ |
| Chloride of Sodium . . . . . | 29·401 | „ | 29·381 | „ |
| Carbonate of Magnesia . . . . | 5·076 | „ | 4·977 | „ |
| Carbonate of Protoxide of Iron . | ·152 | „ | ·140 | „ |
| Carbonate of Lime . . . . . . | 12·432 | „ | 12·402 | „ |
| *Iodide of Sodium . . . . . . | 1·536 | „ | | |
| Sulphate of Potash . . . . . | 2·998 | „ | 3·337 | „ |
| Silica . . . . . . . . . . . | ·247 | „ | ·092 | „ |
| Alumina . . . . . . . . . . | ·002 | „ | | |
| Phosphoric Acid . . . . . . | ·002 | „ | | |
| Carbonic Acid . . . . . . . . | 34·887 | „ | 33·271 | „ |

Imported.

---

* Dr. Killias has corrected Planta. He says the quantity of Iodide of Sodium is only 0·0015 grain.

**TAUNUS** (Frankfort). Altitude 390′.

*Analysis* of 10,000 parts :—

| | |
|---|---|
| Chloride of Sodium | 25·72 |
| „ Potassium | 2·70 |
| Carbonate of Lime | 13·70 |
| „ Magnesia | 1·76 |
| „ Soda | ·20 |
| Sulphate of Lime | ·58 |
| Silica | traces. |
| Alumina | traces. |
| Phosphate of Lime | traces. |
| | 54·66 |
| Carbonic Acid compressed | 28.94 |
| Carbonic Acid by estimate in solution | 17·35 |
| | 46·29 |

Imported and drunk as a table water.

**TCHITLI** (Turkey). Bicarbonate of Soda Spring.

Rises at 55° F., sp. g. 1005.

Contents of a litre = 35 fluid oz.

| | | |
|---|---|---|
| Bicarbonate of Soda | 4·554 | grammes. |
| „ „ Potash | ·148 | „ |
| „ „ Magnesia | ·365 | „ |
| „ „ Lime | ·367 | „ |
| Sulphate of Soda | ·132 | „ |
| Phosphate of Soda | ·061 | „ |
| Chloride of Sodium | ·066 | „ |
| Protoxide of Iron | ·005 | „ |
| Iodide of Sodium | a trace. | |
| Silex | ·057 | „ |
| Free Carbonic Acid | ·475 | „ |
| Imported. | 6·230 | grammes. |

**TOEPLITZ** or **TEPLITZ** (Bohemia). Altitude 648′. Sheltered. Climate mild and salubrious. Mean annual temperature, 50° F.

There are several springs, ranging from 78° to 120° F., nine bathing establishments, and mud-baths also. The baths are best suited to nervous patients, very efficacious in chronic rheumatism, gout, paralysis, and neuralgia.

| *Wolf's Analysis* of 16 oz. Troy = 7680 grs. :— | Haupt-quelle. Temperature, 120° F. | |
|---|---|---|
| Sulphate of Potash | 0·098 | grains. |
| Sulphate of Soda | ·209 | „ |
| Carbonate of Soda | 2·635 | „ |
| Phosphate of Soda | ·014 | „ |
| Fluoride of Silicium | ·351 | „ |
| Chloride of Sodium | ·433 | „ |
| Carbonate of Lime | ·330 | „ |
| Carbonate of Strontia | ·027 | „ |
| Carbonate of Magnesia | ·088 | „ |
| Carbonate of Protoxide of Iron | ·019 | „ |
| Carbonate of Protoxide of Manganese | ·021 | „ |
| Sulphate of Alumina | ·020 | „ |
| Silica | ·443 | „ |
| Crenic Acid | ·034 | „ |
| | 4·803 | grains. |

**VALS** (France). Altitude 2475′.

Beneficial in lithiasis, indigestion, syphilitic and skin diseases, and scrofula.

*M. Henri's Analysis* of 1 litre (35 fluid oz.):—

| | Saint-Jean. | Pré-cieuse. | Dé-sirée. | Rigo-lette. | Magde-leine. |
|---|---|---|---|---|---|
| Temperature | 66° F. | 66° F. | 68° F. | 68° F. | 66° F. |
| Bicarbonate of Calcium | 0·3100 | 0·630 | 0·571 | 0·259 | 0·520 |
| Bicarbonate of Magnesia | 0·1200 | 0·750 | 0·900 | | 0·672 |
| Bicarbonate of Soda | 1·4800 | 5·940 | 6·040 | 5·800 | 7·280 |
| Bicarbonate of Potash | 0·0400 | 0·230 | 0·263 | 0·265 | 0·255 |
| Bicarbonate of Protoxide of Iron with trace of Manganese | 0·0060 | 0·010 | 0·010 | 0·024 | 0·029 |
| Chloride of Sodium and Potassium | 0·0600 | 1·080 | 1·100 | 1·200 | 1·016 |
| Sulphate of Soda | 0·0540 | 0·185 | 0·200 | 0·220 | 0·235 |
| Sulphate of Calcium | 0·0700 | | | | |
| Alumina | 0·0110 | 0·060 | 0·058 | 0·060 | 0·097 |
| Bicarbonate of Lithia | traces. | traces. | traces. | traces. | traces. |
| Arseniate of Soda | | | | | |
| Alkaline Ioduret | | | | | |
| Organic Matter | | | | | |
| Grammes | 2·1510 | 8·885 | 9·142 | 7·828 | 9·104 |
| = Grains | 33 | 136 | 141 | 120 | 140 |
| Carbonic Acid Gas | 0·4250 | 2·218 | 2·145 | 2·095 | 2·050 |

Imported.

Saint-Jean, sedative; Désirée, Précieuse, laxative; Rigolette, Magdeleine, renovating; also Dominique, tonic.

**VERNET** (Eastern Pyrenees). The principal sources of the ancient Thermæ used by the Romans.

There are three springs, temperature 48° F., 91° F., and 137° F. Here Ibrahim Pasha resided. By means of pipes fed by the thermal water the apartments are kept at a comfortable warmth (54° to 59° F.) the whole of the winter (most desirable for phthisical patients), so that the waters can be taken at all seasons. Mean temperature of the atmosphere in October, 61° F.; in November, 51° F.; showing a mild and equable climate.

**VICHY** (Central France). Altitude 787′. Locality charming; climate very mild, hot in summer.

Useful in kidney diseases and diabetes, also in gout and hepatic derangement.

Both for drinking and bathing. Season, May to October.

*Bouquet's Analysis* of a litre (35 fluid oz.):—

| | Grande Grille. | Hôpital. | Célestins. | Hauterive. |
|---|---|---|---|---|
| Temperature | 106° F. | 86° F. | 57·6° F. | 59° F. |
| Carbonic Acid | 0·908 | 1·067 | 1·299 | 2·183 |
| Bicarbonate of Soda | 4·883 | 5·029 | 4·101 | 4·687 |
| Bicarbonate of Potash | 0·352 | 0·440 | 0·231 | 0·189 |
| Bicarbonate of Magnesia | 0·303 | 0·200 | 0·554 | 0·501 |
| Bicarbonate of Strontia | 0·003 | 0·005 | 0·005 | 0·003 |
| Bicarbonate of Lime | 0·434 | 0·570 | 0·669 | 0·432 |
| Bicarbonate of Protoxide of Iron | 0·004 | 0·004 | 0·004 | 0·017 |
| Bicarbonate of Protoxide of Manganese | A trace. | A trace. | A trace. | A trace. |
| Sulphate of Soda | 0·291 | 0·921 | 0·314 | 0·291 |
| Phosphate of Soda | 0·130 | 0·046 | A trace. | 0·046 |
| Arseniate of Soda | 0·002 | 0·002 | 0·003 | 0·002 |
| Borate of Soda | A trace. | A trace. | A trace. | A trace. |
| Chloride of Sodium | 0·534 | 0·518 | 0·550 | 0·534 |
| Silica | 0·070 | 0·050 | 0·065 | 0·071 |
| Organic Matter, Bituminous | A trace. | A trace. | A trace. | A trace. |
| Grammes | 7·914 | 8·222 | 7·865 | 8·946 |
| = Grains | 122 | 126 | 121 | 138 |

Imported.

WEILBACH (Nassau). Altitude 420′. Situated on a fertile declivity. Climate mild.

The water is generally warmed before being drunk.

Good in chest diseases, in gout, rheumatism, and herpetic affections, and in lead and mercury poisoning.

*Fresenius's Analysis* of 16 oz. Troy = 7680 grs.:—

| Sulphur Spring, Temperature 57° F. | | New Soda-Lithia, Temperature 54·5° F. | | |
|---|---|---|---|---|
| Bicarbonate of Soda | 3·123 | | 7·3748 | grains. |
| Bicarbonate of Lithia | ·006 | | ·0452 | „ |
| Bicarbonate of Baryta | ·009 | Carbonate of Iron | ·0193 | „ |
| Bicarbonate of Strontia | ·001 | Carbonate of Manganese | ·0039 | „ |
| Chloride of Sodium | 2·083 | | 9.6677 | „ |
| Chloride of Potassium | ·214 | Sulphate of Soda | 1·7073 | „ |
| Sulphate of Potash | ·298 | | ·4233 | „ |
| Phosphate of Alumina | ·001 | Bromide of Sodium | ·0056 | „ |
| Phosphate of Lime | ·002 | Iodide of Sodium | ·0010 | „ |
| Carbonate of Lime | 2·909 | | ·7504 | „ |
| Carbonate of Magnesia | 2·758 | | ·5563 | „ |
| Silica | ·111 | | ·0943 | „ |
| Organic Matter | ·037 | Carbonate of Ammonia | ·0871 | „ |
| | 11·566 | | 20·6581 | „ |
| *Gases.* | | | | |
| Carbonic Acid | 3·126 c. in. | Carbonic Acid | 5.9553 | c. in. |
| Sulphuretted Hydrogen | ·169 „ | Sulph. Hydrogen | ·0026 | „ |

Imported.

WIESBADEN (Nassau). Altitude 346′. Open to the south, with charming environs. Mean annual temperature 51° F. Season, May to September.

There are twenty-three springs; the Kochbrunnen is the principal.

Useful in chronic rheumatism and gout. The baths are allowed to cool before using them.

*Fresenius's Analysis* of 16 oz. Troy = 7680 grs.:—

| Temperature, 160° F. | | |
|---|---|---|
| Chloride of Sodium | 52·50 | grains. |
| Chloride of Potassium | 1·12 | „ |
| Chloride of Lithium | ·001 | „ |
| Chloride of Ammonium | ·130 | „ |
| Chloride of Calcium | 3·620 | „ |
| Chloride of Magnesium | 1·570 | „ |
| Bromide of Magnesium | ·030 | „ |
| Sulphate of Lime | ·690 | „ |
| Silica | ·460 | „ |
| Carbonate of Lime | 3·210 | „ |
| Carbonate of Magnesia | ·080 | „ |
| Carbonate of Protoxide of Iron | ·040 | „ |
| Carbonate of Protoxide of Manganese | ·004 | „ |
| Phosphate of Lime | ·003 | „ |
| Arseniate of Lime | ·001 | „ |
| Silicate of Alumina | ·004 | „ |
| *Gases.* | | |
| Carbonic Acid | 16·72 | c. in. |
| Nitrogen | ·10 | „ |

WILDBAD (Würtemberg). Altitude 1300′. Scenery wild and romantic. Season, June to September, when the weather is hot; the other months very cold.

There are about fifty warm springs.

These baths are used in chronic rheumatism and gout, and in paraplegic paralysis of the lower extremities. Plethoric habits require care in using the baths.

*Analysis* of 16 oz. Troy = 7680 grs.:—

Temperature, 96° F.

| | |
|---|---|
| Chloride of Sodium | 1·82 grains. |
| Carbonate of Soda | ·53 ,, |
| Sulphate of Soda | ·40 ,, |
| Sulphate of Potash | ·20 ,, |
| Carbonate of Lime | ·34 ,, |
| Carbonate of Magnesia | ·70 ,, |
| Carbonate of Protoxide of Iron and Manganese | ·29 ,, |
| Silica | ·39 ,, |
| | 3·58 grains. |

*Gases.*

| | |
|---|---|
| Carbonic Acid | |
| Nitrogen | |
| Oxygen | |

[The above have been condensed from the works of Dr. Sutro, Dr. Althaus, Dr. Glover, and the various pamphlets issued at the sources of the several Spas.]

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## *The following are sold in bottles:—*

ADELHEIDSQUELLE (Heilbrunn, Germany). Contains a large proportion of Salts of Bromine and Iodine; acts powerfully on the glandular, lymphatic, and cutaneous systems. *Vide* analysis.

ÆSCULAP (Hungary). A recently imported water, which Professor Tichborne has compared with Hunyadi Janos, as being equally purgative, and more antacid, its action is gentle, and at the same time prompt and efficacious.

AIX-LA-CHAPELLE (Rhenish Prussia). For cutaneous diseases, &c.

• ALET (France). Chalybeate. Useful in cases of debility.

APOLLINARIS (Neuenahr). Acidulous, gaseous, and combines the properties of Seltzer and Ems (Kränchen). Good for sickness, dyspepsia, and bad appetite. When impregnated with Carbonic Acid is drunk at meals.

• BARÉGES (France, *Hautes-Pyrénées*). Sulphureous; effective in skin diseases, scrofula, diseased bone, and ulcers. *Vide* analysis.

• BIRMENSDORFF (Switzerland). Alterative bitter saline, consisting chiefly of Sulphates of Lime, Magnesia, and Soda.

BONNES (France, *Basses-Pyrénées*). Sulphureous; is highly extolled for incipient consumption, scrofula, rheumatism, and as a purifier of the blood. *Vide* analysis.

BOURBOULE, LA (France, *Puy-de-Dôme*). For impoverished blood, gout, &c.

BUSSANG (France, *Vosges*). Saline chalybeate; strengthens the digestive organs, acting mildly on the bowels and kidneys.

CARLSBAD (Sprudel, 165° F. Mühlbrunnen, 127° F., and Schlossbrunnen). Alkaline and gaseous; Sprudel is the favourite; drunk for bilious affections, gall stones, jaundice, gout, and gravel; are powerfully purgative. *Vide* analysis.

CARLSBAD-SALT. In bottles.

• CAUTERETS (France, *Hautes-Pyrénées*). Sulphureous; more exciting than Baréges and Bonnes; useful in skin diseases, rheumatism, and scrofula.

• CHALLES (Savoy). Sulphureous; milder in action than Baréges.

CONTREXVILLE (France, *Vosges*). Alkaline, chalybeate; promotes circulation of the blood, good in chlorosis, gastralgia, etc.

EMS (Kessel and Kränchen, Nassau). Saline, gaseous, preferred to Carlsbad in nervous irritability, good in pulmonary as well as scrofulous complaints, gout, etc. *Vide* analysis. EMS-SALT in bottles.

ENGHIEN (Paris, Montmorency). A valuable suphureous water, useful in glandular affections, and as a general tonic.

FACHINGEN (Nassau). Acidulous, gaseous; a favourite beverage, acting on the kidneys and bladder, and counteracting the tendency to lithic acid. *Vide* analysis.

FRIEDRICHSHALL, Bitter Water (Saxe-Meiningen). Alterative, aperient; acting on the liver and pancreas; similar to Pullna. *Vide* analysis. It is very largely consumed in England, being a most valuable alterative and aperient; it is made warm and drunk in doses of half a tumblerful in the morning twice a week. The importations are frequent, as it is bottled at the Spring throughout the year except in frosty weather.

HOMBURG (Central Germany). More active than Kissingen Rakoczi, and better suited to a torpid state of bowels. *Vide* analysis. Also Homburg Salt.

HUNGARIAN BITTER WATER (Royal), like Hunyadi Janos.

HUNYADI JANOS. See BUDA-PESTH. Bitter aperient.

KISSINGEN (Maxbrunnen, Bavaria). Saline, gaseous; less exciting and more aperient than Carlsbad. (Rakoczi, Pandur.) Saline, gaseous; aperient, alterative, deobstruent, with a specific action on the uterine system of females. *Vide* analysis.

KISSINGEN, Bitter Water, is similar to that of Friedrichshall.

KREUZNACH (Elizabeth, Prussia). Saline; contains Iodine; alterative, tonic, and renovating, useful in lymphatic and torpid habits. *Vide* analysis. KREUZNACH-SALT in bottles.

LUHATSCHOWITZ (Moravia, Austria). Contains Bromides and Iodides and Chlorides of Sodium and Carbonates of Soda.

MARIENBAD (Kreuzbrunnen, Bohemia). A gaseous bitter saline, similar in properties to Carlsbad, but milder. *Vide* analysis.

NEUENAHR (on the Rhine, Apollinaris). Gaseous saline; exhilarating, diuretic, slightly acting on the liver and stomach. *Vide* analysis.

OFEN (Rakoczy), Kissingen.

OREZZA (Corsica). Chalybeate, with a trace of Manganese, and highly sparkling; useful in gastralgia, sluggish liver, and spleen, chlorosis, amenorrhœa, and leucorrhœa.

POUGUES (France). Saline, slightly chalybeate, contains 34 grs. in 20 oz., chiefly Bicarbonates of Lime and Magnesia, with Carbonic Acid; drunk for gravel and catarrh of the bladder.

PULLNA (Bohemia). A bitter saline; mild and effective purge, acting without griping. *Vide* analysis.

PYRMONT (Westphalia). A valuable chalybeate in dyspepsia, debility from exhausting diseases, and constitutional weakness. *Vide* analysis.

ROYAT (France, *Puy-de-Dôme*). Alkaline spring, good in cases of gastro-intestinal dyspepsia, rheumatism, &c.

SAINT-MORITZ (Switzerland). Tonic, and stimulating in debility.

SCHWALBACH (Weinbrunnen and Stahlbrunnen, Nassau). Chalybeate; pleasant to drink, tonic, alterative, and restorative; the Weinbrunnen preferred.

* SEIDLITZ, Bitter water (Bohemia). Purgative.

SOULTZMATT (France). Acidulated, gaseous; much used in France as a beverage.

**SPA**, Pouhon; Prince de Condé. Gaseous, chalybeate waters; restorative in cases of debility consequent upon disease, bodily or mental exertion, for both sexes; either of them may be used.

**TARASP** (Switzerland). Drunk for abnormal obesity, &c., &c.

**VALS** (France). Strongly resembling those of Vichy, but less lowering; the principal are, Magdeleine, Précieuse, and Rigolette. *Vide* analysis.

**VICHY**, Source de l'Etat (France). Saint-Yorre, alkaline; Parc. 71° F., alkaline; Des Dames, 61° F., chalybeate, most gaseous; Célestins, 39° F., for gravel and gout; Hauterive, 59° F., Hôpital, 87° F., for indigestion; Grande Grille, 107° F., for liver, dyspepsia, and intermittent fever, loss of appetite, congestion of liver and spleen; Lardy, chalybeate, for anæmia. VICHY-SALT in bottles. *Vide* analysis.

* **WEILBACH** (Nassau). A weak sulphureous water, and largely impregnated with Carbonic Acid Gas; used in chest diseases.

**WILDUNGEN** (Waldeck). Alkaline, diuretic, antilithic, tonic; restorative, useful in leucorrhœa, spermatorrhœa, and, mixed with milk, for chronic bronchial affections.

**WOODHALL** and **PURTON** British waters } are also sold in bottles.
**BETHESDA** and **MISSISQUOI** from the United States }

Those marked with an asterisk are not so frequently in demand, and should be ordered in advance.

*The following waters are drunk at table:—*

The Imperial pint of water (20 ozs.) contains of Saline Matter as follows:—

| | | | | |
|---|---|---|---|---|
| Apollinaris | (Rhenish Prussia) | 22 | grains. | Chiefly Carbonate of Soda. |
| Bellthal | (Rhenish Prussia) | 30 | ,, | Carbonates of Lime, Magnesia, & Soda. |
| Bilin | (Bohemia) | 43 | ,, | Chiefly Carbonate of Soda. |
| Birresborn | (Rhenish Prussia) | 42 | ,, | Carbonate of Soda and Chloride of Sodium. |
| Condillac | (France, Drôme) | 11 | ,, | Chiefly Bicarbonate of Lime. |
| Evian | (Switzerland) | | | |
| Gerolstein | (Rhenish Prussia) | 16 | ,, | Carbonates of Lime, Magnesia, and Soda. |
| Gieshübler | (Bohemia) | 12 | ,, | Chiefly Carbonate of Soda. |
| Harzer | (Germany) | 11 | ,, | Carbonates of Lime and Soda, and Chloride of Sodium. |
| Roisdorf | (Rhenish Prussia) | 34 | ,, | Chloride of Sodium, Carbonates of Soda, Lime and Magnesia. |
| Rosbach | (Homburg) | 15 | ,, | do. do. |
| St. Galmier | (Badoit, France) | 30 | ,, | do. do. |
| Seltzer | (Nassau) | 38 | ,, | Chloride of Sodium and Carbonate of Soda. |
| Sulis | (Bath, Somerset) | 20 | ,, | Sulphates of Lime and Soda, Chloride of Magnesium and Sodium. |
| Taunus | (Frankfort) | 30 | ,, | Carbonate of Lime and Chloride of Potassium and Sodium. |
| Wilhelmsquelle | (Frankfort) | 21 | ,, | Chloride of Sodium, Carbonate of Lime. |

## CLASSIFICATION OF THE MINERAL WATERS.

### Comparatively Pure.

Bristol.
Buxton.
Clifton.
Gastein, 118°.
Malvern.
Schlangenbad, 50°.
Wilbad, 98°.
Winfred.

### Alkaline and Gaseous.

Chateldon.
Condillac.
Contrexville, 53°.
Ems, 85° to 117°.
Fachingen.
Gieshübler.
Neuenahr, 70° to 102°.
Vals.
Vichy.
Wildungen, 96°.

### Saline.

Homburg, 50° to 52°.
Kissingen, 49°, to 51°.

### Bitter Saline.

Birmensdorff.
Cheltenham.
Epsom.
Friedrichshall.
Hunyadi Janos.
Hungarian (Royal).
Kingswood.
Leamington.
Marienbad.
Pullna.
Seidlitz.

### Saline containing Bromine and Iodine.

Achselmannstein, 61°.
Adelheidsquelle, 50°.
Arnstadt.
Carlsbad, 119·3° (Markt-brunnen).
Durkheim.
Ischl.
Kœnigsdorff-Jastrzemb.
Kissingen, 49° to 51°.
Krankenheil.
Kreuznach, 54·5°.
Luhatschowitz, 48·6°.
Mergentheim.
Mondorf, 77°.
Reichenhall.
Tarasp, 37°.
Wiesbaden, 160°.
Woodhall.

### Saline containing Lithia.

Baden-Baden.
Carlsbad, 119° (Markt-brunnen).
Franzensbad, 45°.
Kissingen, 47° to 51°.
Weilbach, 54°.

## COOL, AND THERMAL, UNDER 98° F.

### Sulphureous.

Baden, Austria, 92°.
Berka.
Bonnes, 91·5°.
Challes.
Eilsen, 59°.
Enghien.
Krankenheil.
Labassère, 54°, 57°.
Landeck, 81° to 83°.
Meinburg, 61°.
Nenndorf, 52°.
Schinznach, 96°.

### Chalybeate and Gaseous.

Alet.
Alexandersbad.
Alexisbad.
Altwasser.
Auteuil.
Berka.
Bocklet, 50°.
Bossang.
Charlottenbrunn.
Driburg, 51°.
Kösen, 65°.
Kronthal, 61°.

### Chalybeate,—*continued.*

Lippspringe, 70°.
Marienbad.
Meinburg.
Orezza.
Pougues.
Pyrmont.
Recoaro.
Rippolsdau.
Saint-Maurice, 42°.
Schwalbach, 46° to 51°.
Soden, 68° to 74°.
Spa, 52°.

## HOT SPRINGS.

Wildbad, 98°.
Pfaffers, 100°.
Neuenahr, 102°.
Vichy, 106°.
Lippik, 111°.
Lucca, 116°.
Ems, 117°.
Gastein, 118°.
Bath, 118° to 120°.
Teplitz, 120°.
Leuk, 124°.
Cauterets, 131°.
Aix-la-Chapelle, 131°.
Verney, 137°.
Ofen, 141°.
Baden-Baden, 155°.
Ischia, 158°.
Plombières, 159°.
Wiesbaden, 160°.
Carlsbad, 162°.
Borcette, 171°.

### Sulphureous.

Barèges, 111°.
Aix-les-Bains, 116°.
Aix-la-Chapelle, 131°.
Cauterets, 131°.
Borcette, 140°.
Bagnères-de-Luchon, 154°.

## WATERS FOR THE TABLE.

Apollinaris.
Bellthal.
Bilin.
Birresborn.
Condillac.
Evian.
Gerolstein.
Gieshübler.
Harzer.
Roisdorf.
Rosbach.
St. Galmier.
Seltzer.
Sulis.
Taunus.
Wilhelmsquelle.

# INDEX.

The Names adopted by the British Pharmacopœia are put in Roman letters; all others, whether referring to Official or Non-Official Medicines, are put in Italics. The Appendix is not indexed.

| AB to AC | Dose. | Page |
|---|---|---|
| *Abies Balsamea* | | 313 |
| ,, *excelsa* | | 238 |
| *Acacia Catechu* | | 96 |
| Acaciæ Gummi | | 1 |
| „ Mucilago | 1 to 4 drms. | 1 |
| *Acetas Morphicus* | | 212 |
| „ *Plumbi Depuratus* | | 241 |
| *Acétate de Plomb* | | 241 |
| Acetate of Ammonia Solution | | 37 |
| ,, ,, Lead | | 240 |
| ,, ,, Morphia | | 212 |
| ,, ,, Potash | | 251 |
| ,, ,, Soda | | 290 |
| ,, ,, Zinc | | 328 |
| Acetic Acid | | 3 |
| ,, ,, diluted | 1 to 2 drms. | 3 |
| ,, ,, glacial | | 4 |
| ,, Ether | | 26 |
| Acetum | 1 to 2 drms. | 2 |
| ,, Cantharidis | | 86 |
| ,, Scillæ | 15 to 40 minims | 282 |
| *Acid, Azotic* | | 14 |
| ,, *Benzoic* | | 6 |
| ,, *Chlorhydric* | | 12 |
| ,, *Chrysophanic* | | 10 |
| ,, *Cyanhydric* | | 13 |
| ,, *Phenic* | | 8 |
| ,, *Prussic* | | 13 |
| ,, *Sulphocarbolic* | | 10 |
| ,, Solution of Nitrate of Mercury | | 171 |
| ,, Tartrate of Potash | | 257 |
| *Acide Acétique, crystallisable* | | 4 |
| ,, ,, *du Bois* | | 3 |
| ,, *Phénique. See* Acidum Carbolicum | | 7 |
| *Acidi Boracici* | | 7 |
| ,, ,, *Lotio* | | 7 |

**Official Names in Roman; all others in Italics.**

| AC | Dose. | Page |
|---|---|---|
| *Acidi Boracici Unguentum* | | 7 |
| ,, *Bromohydrici Solutio* | | 72 |
| ,, Carbolici *Aqua* | | 9 |
| ,, ,, *Emplastrum* | | 9 |
| ,, ,, *Gargarisma* | | 8 |
| ,, ,, Glycerinum | 5 to 10 minims | 9 |
| ,, ,, *Injectio* | | 8 |
| ,, ,, ,, *Hypodermic* | | 8 |
| ,, ,, *Lotio* | | 9 |
| ,, ,, *Spray* | | 8 |
| ,, ,, *Suppositoria* | | 9 |
| ,, ,, Suppositoria c. Sapone | 1 gr. in each | 9 |
| ,, ,, *Unguentum* | | 9 |
| ,, ,, *Vapor* | | 8 |
| ,, Gallici Glycerinum | 10 to 60 minims | 12 |
| ,, Hydrocyanici Vapor | | 14 |
| ,, *Pyrogallici Unguentum* | | 17 |
| ,, *Salicylici Unguentum* | | 17 |
| ,, Tannici Glycerinum | 10 to 40 minims | 21 |
| ,, ,, *Pessary* | | 22 |
| ,, ,, *c. Opio Suppositorium* | | 22 |
| ,, ,, c. Sapone Suppositoria | | 21 |
| ,, ,, Suppositoria | | 21 |
| ,, ,, Trochisci | $\frac{1}{2}$ gr. in each.—1 to 6 loz. | 21 |
| ,, ,, *Unguentum c. Opio* | | 22 |
| Acidum Aceticum | | 3 |
| ,, ,, *aromaticum* | | 4 |
| ,, ,, *concentratissimum* | | 4 |
| ,, ,, *concentratum* | | 4 |
| ,, ,, dilutum | 1 to 2 drms. | 3 |
| ,, ,, glaciale | | 4 |
| ,, ,, *for subcutaneous injection* | | 3 |
| ,, *Arsenicosum* | | 5 |
| ,, Arseniosum | $\frac{1}{60}$ to $\frac{1}{12}$ gr. | 5 |
| ,, Benzoicum | 5 to 15 grs. | 6 |
| ,, *Boracicum* | | 7 |
| ,, Carbolicum | 1 to 3 grs. | 7 |
| ,, ,, *for hypodermic injection* | | 8 |
| ,, *Chromicum* | | 10 |
| ,, *Chrysophanicum* | | 10 |
| ,, Citricum | 10 to 30 grs. | 10 |
| ,, Gallicum | 3 to 10 grs.—10 to 60 in albuminuria | 11 |
| ,, *Gallo-tannicum* | | 21 |
| ,, Hydrochloricum | | 12 |
| ,, ,, dilutum | 10 to 30 minims | 13 |
| ,, Hydrocyanicum dilutum | 2 to 8 minims | 13 |
| ,, *Lacticum* | | 14 |
| ,, *Meconicum* | | 224 |
| ,, *Metaphosphoricum* | | 17 |
| ,, *Muriaticum purum* | | 12 |

**Official Names in Roman; all others in Italics.**

| AC to AE | Dose. | Page |
|---|---|---|
| Acidum Nitricum | | 14 |
| ,, Nitricum dilutum | 10 to 30 minims | 15 |
| ,, Nitro-hydrochloricum dilutum | 5 to 20 minims | 15 |
| ,, Nitro-hydrochloricum dilutum, *Bath* | | 16 |
| ,, *Oleicum* | | 222 |
| ,, *Opianicum* | | 224 |
| ,, *Phenicum* | | 7 |
| ,, Phosphoricum dilutum | 10 to 30 minims | 16 |
| ,, ,, *glaciale* | | 17 |
| ,, *Pyrogallicum* | | 17 |
| ,, *Pyroligneum* | | 3 |
| ,, *Salicylicum* | | 17 |
| ,, Sulphuricum | | 18 |
| ,, ,, Aromaticum | 5 to 30 minims | 19 |
| ,, ,, dilutum | 5 to 30 minims | 19 |
| ,, Sulphurosum | ½ to 1 drm. | 19 |
| ,, *Sulpho-carbolicum* | | 10 |
| ,, Tannicum | 2 to 10 grs. | 20 |
| ,, Tartaricum | 10 to 30 grs | 22 |
| Aconiti *Chloroformum* | | 24 |
| ,, Extractum | 1 to 2 grs. | 23 |
| ,, *Extr. Rad. Alcoholic* | | 24 |
| ,, Folia | | 22 |
| ,, Linimentum | | 23 |
| ,, Radix | | 23 |
| ,, *Succus* | 15 to 20 minims | 23 |
| ,, Tinctura | 5 to 15 minims. | 24 |
| ,, *Trochisci* | | 24 |
| Aconitia | | 24 |
| Aconitiæ Unguentum | | 24 |
| Aconitine Ointment | | 24 |
| *Aconitum Napellus* | | 22 |
| *Actæa Racemosa* | | 25 |
| *Actææ Racemosæ Tinct.* | | 25 |
| Adeps Benzoatus | | 26 |
| ,, *odoriferus* | | 26 |
| ,, *Oxygenatus* | | 26 |
| ,, præparatus | | 25 |
| *Ægle Marmelos* | | 63 |
| Æther | 20 to 40 minims | 27 |
| ,, Aceticus | 20 to 60 minims | 26 |
| ,, *Chlorhydricus Alcoholicus* | | 28 |
| ,, *Chloricus. See* Spir. Chloroformi | | 104 |
| ,, *Nitricus Alcoholicus* | | 300 |
| ,, purus | | 28 |
| ,, *Sulphuricus.* | | 27 |
| ,, ,, *Alcoholicus* | | 28 |
| Ætheris *Chlorati Spiritus* | | 28 |
| ,, Nitrosi Spiritus | ½ to 2 drms | 299 |
| ,, Spiritus | 30 to 60 minims | 28 |

**Official Names in Roman; all others in Italics.**

| AE to AL | Dose. | Page |
|---|---|---|
| Ætheris Spiritus *Compositus* | | 28 |
| „ „ *Muriaticus* | | 28 |
| *Aetheroleum Carvi* | | 92 |
| „ *Cedro* | | 194 |
| „ *Rosmarini* | | 271 |
| „ *Sinapis* | | 287 |
| „ *Terebinthinæ* | | 314 |
| Albumen Ovi | | 28 |
| „ of Egg | | 28 |
| *Alchemilla Arvensis* | | 29 |
| „ „ *Decoctum* | | 29 |
| Alcohol Amylicum | | 29 |
| „ *Phenylic* | | 7 |
| *Alcoholetum Lavandulæ Comp.* | | 194 |
| *Alcoöl Camphré* | | 83 |
| *Alcoolat de Lavande Comp.* | | 194 |
| „ *de Menthe Poivrée* | | 209 |
| *Alder, Black* | | 265 |
| *Allspice Tree* | | 237 |
| Almonds, Bitter | | 42 |
| „ Jordan | | 43 |
| Aloe Barbadensis | 2 to 4 grs. | 29 |
| „ Socotrina | 3 to 6 grs. | 30 |
| „ *Vulgaris* | | 29 |
| Aloes Barbadensis Enema | | 29 |
| „ „ Extractum | ½ to 2 grs. | 29 |
| „ „ Pilula | 4 to 8 grs. | 30 |
| „ „ „ et Ferri | 5 to 10 grs. | 30 |
| „ Socotrinæ Decoctum Comp. | ½ to 2 oz. | 31 |
| „ „ Enema | | 31 |
| „ „ Extractum | 1½ to 3 grs. | 31 |
| „ „ Pilula | 5 to 10 grs. | 31 |
| „ „ „ *cum Sapone* | | 31 |
| „ „ Pilula et Assafœtidæ | 5 to 10 grs. | 32 |
| „ „ et Myrrhæ Pilula | 5 to 10 grs. | 32 |
| „ „ Tinctura | 1 to 2 drms. | 32 |
| „ „ Vinum | 1 to 2 drms. | 32 |
| *Aloin* | 1 to 2 grs. | 30 |
| Alum | | 33 |
| „ *Cataplasm* | | 34 |
| „ *Chlor.* | | 34 |
| „ *Gargle* | | 34 |
| „ *Iron* | | 34 |
| „ *Roche* | | 33 |
| „ *Whey* | | 34 |
| Alumen | 10 to 20 grs. | 33 |
| „ exsiccatum | | 34 |
| „ *Ustum* | | 34 |
| *Alumina* | | 33 |
| *Aluminium* | | 32 |

**Official Names in Roman; all others in Italics.**

| AL to AM | Dose. | Page |
|---|---|---|
| *Aluminium, Chloride of* | | 34 |
| *Amber, Oil of* | | 306 |
| *American Eclectic Remedies* | | 347 |
| *Amidon* | | 44 |
| „ *Glycéré* | | 44 |
| *Ammonia* | | 37 |
| „ *Liquida* | | 40 |
| „ *Pura Liquida* | | 40 |
| Ammoniaci Emplastr. c. Hydrarg | | 168 |
| „ *Haust. Fœtid.* | | 41 |
| „ Mistura | ½ to 1 oz. | 35 |
| „ „ *Comp.* | | 35 |
| „ „ *Ipec. et Lobeliæ* | | 35 |
| Ammoniacum | 10 to 20 grs. | 34 |
| *Ammoniaque Benzoate* | | 38 |
| „ *Carbonate* | | 39 |
| „ *Liquide* | | 40 |
| Ammoniæ Acetatis Liquor | 2 to 6 drms. | 37 |
| „ „ „ *Concentratus* | | 38 |
| „ *Aqua. See* Liquor | | 40 |
| „ Aromaticus Spiritus | 20 to 60 minims | 39 |
| „ *Arsenitis Liquor* | | 6 |
| „ Benzoas | 10 to 20 grs. | 38 |
| „ Carbonas | 3 to 10 grs. | 39 |
| „ Citratis Liquor | 2 to 6 drms. | 40 |
| „ *Hydrochloras* | | 36 |
| „ Linimentum | | 41 |
| „ Liquor | 10 to 20 minims | 40 |
| „ „ fortior | | 40 |
| „ *Murias* | | 36 |
| „ Nitras | | 41 |
| „ Phosphas | 5 to 20 grs. | 42 |
| „ *Sesquicarbonas. See* Ammoniæ Carbonas | | 39 |
| „ Spiritus Aromaticus | 20 to 60 minims | 39 |
| „ „ Fœtidus | | 41 |
| „ *Tinctura Composita* | | 41 |
| Ammoniated Mercury | | 177 |
| *Ammonicus Supercarbonas* | | 39 |
| Ammonii Bromidum | 5 to 20 grs. | 35 |
| „ „ *Lozenges* | | 35 |
| „ Chloridum | 10 grs. | 36 |
| „ „ *Draught* | | 36 |
| „ „ *Lotion* | | 36 |
| „ „ *Lozenges* | | 36 |
| „ *Iodidum* | 2 to 5 grs. | 36 |
| „ „ *Ointment* | | 37 |
| *Ammonium* | | 35 |
| „ *Carbonicum* | | 39 |
| „ *Chloratum* | | 36 |
| „ *Phosphoricum* | | 42 |

| AM to AN | Dose. | Page |
|---|---|---|
| Amygdala Amara | | 42 |
| „ Dulcis | | 43 |
| Amygdalæ *Amaræ Mistura* | | 42 |
| „ Mistura | 1 to 2 oz. | 43 |
| „ Oleum | 2 to 4 drms. | 43 |
| „ Pulvis Compositus | 60 to 120 grs. | 43 |
| *Amygdalus Communis* | | 43 |
| Amyl Nitris | by inhalation 2 to 5 minims. Caution required | 43 |
| Amyli *Decoctum* | | 45 |
| „ Glycerinum | | 44 |
| „ Mucilago | | 44 |
| Amylic Alcohol | | 29 |
| Amylum | | 44 |
| „ *Iodatum* | | 45 |
| *Anacyclus Pyrethrum* | | 259 |
| *Analysis of Mineral Springs. See Waters, Mineral* | | 350 |
| *Aneth* | | 45 |
| Anethi Aqua | ½ to 1 oz. | 45 |
| „ Fructus | | 45 |
| „ Oleum | 1 to 4 minims | 45 |
| *Anethum graveolens* | | 45 |
| *Angustura Bark* | | 125 |
| *Angusturæ Infusum* | | 126 |
| Animal Charcoal | | 89 |
| „ „ purified | | 89 |
| Anisi Essentia | 10 to 20 minims | 46 |
| „ Oleum | 1 to 4 minims | 45 |
| *Anodyne Spirit, Hoffman's* | | 28 |
| Anthemidis Extractum | 2 to 10 grs. | 46 |
| „ Flores | | 46 |
| „ Infusum | 1 to 3 oz. | 46 |
| „ Oleum | 2 to 4 minims | 46 |
| *Anthemis nobilis* | | 46 |
| *Antidotes* to Acids, Arsenious | | 5 |
| „ „ Carbolic | | 8 |
| „ „ Hydrochloric | | 12 |
| „ „ Hydrocyanic | | 14 |
| „ „ Nitric | | 14 |
| „ „ Nitro-hydrochloric | | 16 |
| „ „ *Prussic* | | 14 |
| „ „ Sulphuric | | 18 |
| „ Aconite | | 24 |
| „ Alkalies, Potash | | 258 |
| „ „ Soda. Same as for Potash | | 250 |
| „ Antimony Chloride | | 48 |
| „ „ Tartarated | | 50 |
| „ Aqua Laurocerasi. Same as for Hydrocyanic Acid | | 14 |
| „ Argenti Nitras | | 55 |
| „ Arnica | | 57 |
| „ Arseniate of Iron. Same as for Arsenious Acid | | 5 |

**Official Names in Roman; all others in Italics.**

| AN | Dose. | Page |
|---|---|---|
| *Antidotes* to Arseniate of Soda. Same as Arsenious Acid | | 5 |
| ,, Arsenic | | 5 |
| ,, Atropia. Same as for Belladonna | | 64 |
| ,, Belladonna | | 64 |
| ,, Calx Chlorata | | 77 |
| ,, Camphor | | 84 |
| ,, Cannabis Indica | | 85 |
| ,, Cantharides | | 86 |
| ,, Chloral Hydrate | | 101 |
| ,, Chlori Liquor | | 102 |
| ,, Chloride of Lime | | 77 |
| ,, ,, Zinc | | 330 |
| ,, Chloroform | | 104 |
| ,, Colchicum | | 111 |
| ,, Conium | | 116 |
| ,, Copper, Sulphate of | | 125 |
| ,, Croton Oil | | 123 |
| ,, Cupri Sulphas | | 125 |
| ,, Digitalis | | 128 |
| ,, Elaterium | | 130 |
| ,, Ferri Arsenias | | 138 |
| ,, *Gelsemium* | | 155 |
| ,, Henbane | | 178 |
| ,, Hydrargyri Perchloridum | | 174 |
| ,, Hyoscyamus | | 178 |
| ,, Iodine | | 183 |
| ,, Iron, Arseniate of | | 138 |
| ,, Laurocerasi Folia. *See* Acidum Hydrocyanicum | | 14 |
| ,, Lead | | 244 |
| ,, Lobelia | | 200 |
| ,, Mercury Perchloride | | 174 |
| ,, Morphia | | 214 |
| ,, Nux Vomica | | 220 |
| ,, Opium | | 225 |
| ,, Perchloride of Mercury | | 174 |
| ,, Potash | | 250 |
| ,, Savin | | 273 |
| ,, Silver Nitrate | | 55 |
| ,, Soda. Same as for Potash | | 250 |
| ,, Strychnia | | 44, 304 |
| ,, Stramonium. Same as for Belladonna | | 64 |
| ,, Tabaci Folia | | 311 |
| ,, Zinc, Salts of | | 327 |
| *Antidotum Arsenici* | | 5 |
| Antimoniale Vinum | 5 to 30 minims | 50 |
| Antimonialis Pulvis | 2 to 6 grs. | 47 |
| Antimonii Chloridi Liquor | | 48 |
| ,, Oxidum | 1 to 3 grs. | 47 |
| ,, *Oxysulphuretum.* *See* Ant. Sulphuratum | | 48 |

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| AN to AQ | Dose. | Page |
|---|---|---|
| Antimonii *et Potassæ Tartras.* *See* Ant. Tartaratum | | 49 |
| ,, *Sulphuretum Aureum.* *See* Ant. Sulphuratum | | 48 |
| ,, *Sulphuretum præcipitatum.* *See* Ant. Sulphuratum | | 48 |
| ,, Tartarati Unguentum | | 50 |
| ,, *Unguentum* | | 50 |
| ,, *Vinum* | | 50 |
| *Antimonium* | | 47 |
| ,, Nigrum | | 48 |
| ,, Sulphuratum | 1 to 5 grs. | 48 |
| ,, Tartaratum<br>,, *Tartarizatum* | Diaphoretic $\frac{1}{16}$ to $\frac{1}{8}$ gr.<br>Depressant $\frac{1}{8}$ to 1 gr.<br>Emetic . 1 to 2 grs. | 49 |
| *Antimony* | | 47 |
| ,, Black | | 48 |
| ,, *Prepared Sulphuret of* | | 48 |
| ,, Sulphurated | | 48 |
| ,, Oxide of | | 47 |
| ,, Solution of Chloride of | | 48 |
| ,, *Sulphide of* | | 48 |
| ,, Tartarated | | 49 |
| *Apis Mellifica* | | 97, 208 |
| *Apomorphia* | | 224 |
| *Apozème de Cousso* | | 126 |
| ,, *Grenadier* | | 161 |
| *Appendix* | | 334 |
| Aqua (*group*) | | 50, 52 |
| ,, *Acidi Carbolici* | | 9 |
| ,, *Ammoniæ* | | 40 |
| ,, *Amygd. Amar.* | | 193 |
| ,, Anethi | ½ to 1 oz. | 45 |
| ,, Aurantii Floris | ½ to 1 oz. | 60 |
| ,, *Calcariæ* | | 79 |
| ,, *Calcis.* *See* Liquor | | 79 |
| ,, Camphoræ | 1 to 2 oz. | 83 |
| ,, Carui | 1 to 2 oz. | 92 |
| ,, *Chlorini* | | 102 |
| ,, Chloroformi | | 104 |
| ,, Cinnamomi | 1 to 2 oz. | 109 |
| ,, *Creasoti* | | 120 |
| ,, Destillata | | 52 |
| ,, Fœniculi | 1 to 2 oz. | 153 |
| ,, Laurocerasi | 5 to 30 minims | 193 |
| ,, *Lithiæ Effervescens.* *See* Liquor | | 199 |
| ,, Menthæ Piperitæ | 1 to 2 oz. | 209 |
| ,, ,, Viridis | 1 to 2 oz. | 210 |
| ,, *Opii* | | 228 |
| ,, *Phagedænica Flava* | | 175 |
| ,, ,, *Nigra* | | 176 |
| ,, *Picis* | | 239 |
| ,, Pimentæ | 1 to 2 oz. | 237 |

**Official Names in Roman; all others in Italics.**

| AQ to AR | Dose. | Page |
|---|---|---|
| Aqua *Plumbi* | | 244 |
| ,, *Potassæ Effervescens. See* Liquor | | 253 |
| ,, *Regia* | | 16 |
| ,, Rosæ | 1 to 2 oz. | 270 |
| ,, Sambuci | | 275 |
| ,, *Sodæ Effervescens. See* Liquor | | 292 |
| *Araroba Powder* | | 53 |
| *Arctostaphylos Uva Ursi* | | 322 |
| Areca | | 53 |
| ,, *Catechu* | | 53 |
| ,, *Nut* | | 53 |
| Argel leaves | | 284 |
| Argenti Nitras | $\frac{1}{8}$ to $\frac{1}{3}$ gr. | 54 |
| ,, ,, *c. Kali Nitrico* | | 55 |
| ,, ,, *Caustic point* | | 55 |
| ,, Oxidum | $\frac{1}{2}$ to 2 grs. | 55 |
| ,, *Nitratis Lotio Etherea* | | 55 |
| ,, ,, ,, *Fortis* | | 55 |
| *Argentum* | | 53 |
| ,, Purificatum | | 55 |
| *Aristolochia Serpentaria* | | 285 |
| Armoraciæ *Infusum compositum* | | 56 |
| ,, Radix | | 56 |
| ,, Spiritus compositus | 1 to 3 drms. | 56 |
| *Arnica Montana* | | 56 |
| ,, *Opodeldoc* | | 57 |
| Arnicæ Radix | | 56 |
| ,, Tinctura | 1 to 2 drms. | 57 |
| Aromatic Sulphuric Acid | | 19 |
| Arsenias Ferri | $\frac{1}{16}$ gr. | 138 |
| Arseniate of Iron | $\frac{1}{16}$ gr. | 138 |
| ,, Soda | $\frac{1}{16}$ to $\frac{1}{8}$ gr. | 290 |
| Arseniatis Sodæ Liquor | 5 to 10 minims | 291 |
| *Arsenic, Iodide of* | | 6 |
| ,, *White* | | 5 |
| *Arsenical Caustic Powders* | | 6 |
| ,, *Paste for Dentists* | | 6 |
| ,, ,, *for cancer* | | 6 |
| Arsenicalis Liquor | 2 to 8 minims | 5 |
| *Arsenici Antidotum* | | 5 |
| ,, *et Hydrargyri Hydriodatis Liquor* | | 6 |
| ,, *Iodidum* | $\frac{1}{30}$ gr. | 6 |
| ,, Liquor Hydrochloricus | 2 to 8 minims | 5 |
| *Arsenicum* | | 57 |
| ,, *album. See* Acidum Arseniosum | | 5 |
| Arsenious Acid | $\frac{1}{60}$ to $\frac{1}{12}$ gr. | 5 |
| *Arsénite de Potasse, Solution* | | 5 |
| *Artanthe elongata* | | 208 |
| *Artemisia* | | 275 |
| Articles employed in chemical testing | | 334 |

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| AS to BA | Dose. | Page |
|---|---|---|
| *Asagræa officinalis* | | 272 |
| *Asclepedin* | | 347 |
| *Aspidium Filix-Mas* | | 152 |
| Assafœtida | 5 to 20 grs. | 57 |
| Assafœtidæ Enema | | 58 |
| ,, Pilula composita | 5 to 10 grs. | 58 |
| ,, Tinctura | ½ to 1 drm. | 58 |
| *Astragalus verus* | | 319 |
| *Atropa Belladonna* | | 64 |
| Atropia | | 58 |
| Atropiæ Liquor | 1 minim | 59 |
| ,, Sulphas | | 59 |
| ,, ,, Liquor | 1 to 2 minims | 59 |
| ,, Unguentum | | 59 |
| *Atropine Gelatine* | | 59 |
| ,, *Paper* | | 59 |
| *Atropinum Sulphuricum* | | 59 |
| Aurantii Cortex | | 60 |
| ,, Floris Aqua | ½ to 1 oz. | 60 |
| ,, ,, Syrupus | 1 to 2 drms. | 60 |
| ,, Infusum | 1 to 2 ozs. | 60 |
| ,, ,, compositum | 1 to 2 ozs. | 60 |
| ,, Syrupus | 1 to 2 drms. | 61 |
| ,, Tinctura | 1 to 2 drms. | 61 |
| ,, ,, Recentis | 1 to 2 drms. | 61 |
| ,, Vinum | | 61 |
| *Autenriethi Unguentum* | | 50 |
| *Axungia. See* Adeps | | 25 |
| *Azotic Acid* | | 14 |
| Bael Fruit | | 63 |
| *Balneum Alkalinum* | | 293 |
| ,, *Sulphuretum* | | 251 |
| Balsam of Peru | 10 to 15 minims | 62 |
| ,, ,, Tolu | | 62 |
| ,, ,, ,, Syrup | 1 to 2 drms. | 62 |
| ,, ,, ,, Tincture | 15 to 30 minims | 63 |
| ,, *Friar's* | | 67 |
| ,, *Gurjun* | | 61 |
| ,, *Traumatic* | | 67 |
| *Balsami Peruviani Unguentum* | | 62 |
| ,, ,, ,, *Resinosum* | | 62 |
| *Balsamodendron Myrrha* | | 218 |
| *Balsamum Canadense. See* Terebinthina Canadensis | | 313 |
| ,, *Dipterocarpi* | | 61 |
| ,, Peruvianum | 10 to 15 minims | 62 |
| ,, Tolutanum | 10 to 20 grs. | 62 |
| *Baptisin* | | 335 |
| Barbadoes Aloes | | 29 |
| Barley | | 163 |
| *Barosma betulina* | | 77 |

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| BA to BI | Dose. | Page |
|---|---|---|
| *Barosma crenulata* | | 73 |
| ,, *serratifolia* | | 73 |
| *Bath of Acidum Nitrohydrochloricum dilutum* | | 16 |
| *Battley's Liquor Opii Sedativus* | | 229 |
| *Baume de Copahu* | | 118 |
| ,, *de Vie. See* Decoct. Aloes Co. | | 31 |
| ,, *du Commandeur* | | 67 |
| Bearberry leaves | | 322 |
| *Beaver* | | 94 |
| Beberiæ Sulphas | 1 to 3 grs. tonic. 5 to 10 grs. antiperiodic | 63 |
| Bebeeru Bark | | 219 |
| Beer Yeast | | 97 |
| Belæ Fructus | | 63 |
| ,, Extractum Liquidum | 1 to 2 drms. | 64 |
| Belladonna | | 64 |
| Belladonnæ *Chloroformum* | | 66 |
| ,, Emplastrum | | 65 |
| ,, Extractum | ¼ to ½ gr. | 65 |
| ,, Linimentum | | 66 |
| ,, ,, *Comp.* | | 66 |
| ,, Radix | | 66 |
| ,, Succus | 5 to 15 minims | 65 |
| ,, *Suppositoria* | | 67 |
| ,, Tinctura | 5 to 20 minims | 66 |
| ,, Unguentum | | 66 |
| *Benzoate d'Ammoniaque* | | 38 |
| Benzoate of Ammonia | | 38 |
| ,, *Potash* | | 252 |
| Benzoated Lard | | 26 |
| Benzoic Acid | 5 to 15 grs. | 6 |
| Benzoin | | 67 |
| ,, *Flowers of* | | 6 |
| ,, *Lotion of* | | 67 |
| Benzoini Tinctura composita | ½ to 1 drm. | 67 |
| ,, *Tinctura simplex* | | 67 |
| ,, *Unguentum* | | 26 |
| Benzoinum | 10 to 30 grs. | 67 |
| *Betel Nut* | | 53 |
| *Benzoyl, Hydrate of* | | 6 |
| *Betula Alba* | | 68 |
| ,, ,, *Oleum* | | 68 |
| *Beurre de Cacao* | | 315 |
| ,, *de Muscade* | | 218 |
| *Bicarbonas Kalicus* | | 252 |
| ,, *Natricus* | | 292 |
| Bicarbonate of Potash | | 252 |
| ,, Soda | | 291 |
| *Bicarbonate de Soude* | | 292 |
| *Bichloride of Methylene* | | 104 |
| *Bichromate of Potash* | | 253 |

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| BI to BO | Dose. | Page |
|---|---|---|
| *Bilis bovina depurata* | | 136 |
| *Bimeconate of Morphia Solution* | | 228 |
| *Birch, Common European* | | 68 |
| Bismuth | | 68 |
| ,, *Magistery of* | | 69 |
| ,, *Nitrate of* | | 69 |
| ,, *White* | | 69 |
| Bismuthi Carbonas | 5 to 20 grs. | 68 |
| ,, Liquor et Amm. Citratis | ½ to 1 drm. | 69 |
| ,, *Lotio* | | 70 |
| ,, *Nitras* | | 69 |
| ,, Oxidum | 5 to 15 grs. | 70 |
| ,, Subnitras | 5 to 15 grs. | 69 |
| ,, Trochisci . . . 2 grs. each. | 1 to 6 loz. | 70 |
| ,, *Unguentum* | | 70 |
| Bismuthum | | 68 |
| ,, *Nitricum præcipitatum* | | 69 |
| ,, Purificatum | | 68 |
| ,, *Sub-nitricum* | | 69 |
| Bitter Almond | | 42 |
| ,, ,, *Mixture* | | 42 |
| ,, Orange Peel | | 60 |
| *Bittersweet* | | 129 |
| Black Antimony | | 48 |
| ,, *Catechu* | | 96 |
| ,, *Drop (Cook)* | | 229 |
| ,, Oxide of Manganese | | 206 |
| ,, Pepper | | 238 |
| ,, Pitch | | 240 |
| ,, *Wash* | | 176 |
| *Bladder-Wrack* | | 153 |
| *Blanc de Baleine* | | 98 |
| Blistering Fluid | | 87 |
| ,, Paper | | 87 |
| ,, *Tissue, Brown's* | | 88 |
| *Blue Gum Tree* | | 133 |
| *Bois de Campêchu* | | 165 |
| *Boldine* | | 71 |
| *Boldo* | | 71 |
| ,, *Tinctura* | | 71 |
| Bone Ash | | 229 |
| ,, Black | | 89 |
| *Boracic Acid* | | 7 |
| Boracis *Gargarisma* | | 72 |
| ,, Glycerinum | ½ to 1½ drms. | 71 |
| ,, *Lotio* | | 72 |
| ,, Mel | | 72 |
| ,, *Tinct. et Myrrhæ* | | 72 |
| ,, *Unguentum* | | 72 |
| Borax | 5 to 30 grs. | 71 |

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| BO to CA | Dose. | Page |
|---|---|---|
| *Bos Taurus* | | 191 |
| *Bougies, Medicated* | | 346 |
| *Bran Poultice* | | 136 |
| *Brandish's Alkaline Solution* | | 250 |
| Brandy | | 301 |
| ,, *Mixture* | | 301 |
| *Brayera Anthelmintica* | | 126 |
| Bread Crumb | | 211 |
| *Brecknell's Pure Yellow Soap* | | 278 |
| British Vinegar | | 2 |
| *Brockedon's compressed Pills* | | 292 |
| *Brometum Kalicum* | | 247 |
| Bromide of Ammonium | 5 to 20 grs. | 35 |
| ,, ,, *Lozenges* | | 35 |
| ,, *Mercury* | | 169 |
| ,, Potassium | 20 to 60 grs. | 246 |
| Bromine | | 72 |
| Bromum | | 72 |
| Broom, Decoction | | 283 |
| ,, Juice | | 282 |
| ,, Tops | | 282 |
| *Brown's Blistering Tissue* | | 88 |
| Buchu Folia | 20 to 40 grs. | 73 |
| ,, Infusum | 1 to 4 oz. | 73 |
| ,, Tinctura | 1 to 4 drms. | 73 |
| Buckthorn Juice | | 265 |
| ,, Syrup | | 265 |
| *Bulbus Scillæ* | | 281 |
| Burgundy Pitch | | 238 |
| *Burnett's Solution* | | 330 |
| *Busserole* | | 322 |
| *Butter of Cacao, or Oil of Theobroma* | | 315 |
| *Butyrum Cacao* | | 315 |
| *Byne* | | 73 |
| *Bynes Extractum* | | 73 |
| Cabbage Rose Petals | | 269 |
| *Cacao Butter* | | 315 |
| *Cachou Tinctura* | | 95 |
| Cadmii Iodidi Unguentum | | 74 |
| ,, Iodidum | | 74 |
| ,, *Sulphas* | | 74 |
| *Cadmium* | | 74 |
| ,, *Sulphuricum* | | 74 |
| *Caffeine* | | 74 |
| *Caffeine Citrate* | | 75 |
| Cajuputi Oleum | 1 to 3 minims | 75 |
| ,, Spiritus | 50 to 100 minims | 75 |
| Calabar Bean | 1 to 4 grs. | 235 |
| ,, Extract | $\frac{1}{16}$ to $\frac{1}{4}$ gr. | 235 |
| ,, *Paper* | | 236 |

| CA | Dose. | Page |
|---|---|---|
| Calabar *Tincture* | | 236 |
| *Calamine* | | 329 |
| *Calcaria Carbonica cruda* | | 79 |
| ,, *Caustica Soluta* | | 78 |
| ,, *Hyperphosphorosa* | | 79 |
| ,, *Hypochlorosa* | | 77 |
| ,, *Phosphorica* | | 80 |
| *Calcariæ Aqua* | | 79 |
| Calcii *Chloridi Liquor* | | 76 |
| ,, Chloridum | | 76 |
| ,, ,, *in Crystals* | | 76 |
| ,, *Phosphas Præcipitata* | | 80 |
| *Calcis Carbolas* | | 9 |
| Calcis Carbonas præcipitata | 10 to 100 grs. | 78 |
| ,, *Carbonas. See* Creta Præparata | | 120 |
| ,, *Chloruretum* | | 77 |
| ,, Hydras | | 78 |
| ,, Linimentum | | 78 |
| ,, Liquor | ½ to 2 oz. | 79 |
| ,, ,, Chloratæ | 20 to 40 minims | 77 |
| ,, ,, Saccharatus | 15 to 60 minims | 79 |
| ,, Hypophosphis | 5 to 10 grs. | 79 |
| ,, *Hypophosphitis Syrupus* | | 80 |
| ,, Phosphas | 10 to 40 grs. | 80 |
| *Calcium* | | 75 |
| ,, *Chloratum Siccum* | | 76 |
| ,, ,, *Fusum* | | 76 |
| ,, *Phosphoricum* | | 80 |
| Calefaciens Emplastrum | | 87 |
| *Calendula* | | 80 |
| ,, *Tinctura* | | 80 |
| *Calomelas. See* Hydr. Subchloridum | | 175 |
| *Calotropis Gigantea* | | 217 |
| Calumbæ Extractum | 2 to 10 grs. | 81 |
| ,, Infusum | 1 to 2 oz. | 81 |
| ,, Radix | 10 to 20 grs. | 80 |
| ,, Tinctura | ½ to 2 drms. | 81 |
| Calx | | 76 |
| ,, Chlorata | | 76 |
| ,, *Chlorinata* | | 77 |
| ,, *Hydrargyri Alba* | | 177 |
| Cambogia | 1 to 5 grs. | 81 |
| Cambogiæ Pilula composita | 5 to 10 grs. | 82 |
| *Camphor Balls* | | 84 |
| ,, *Monobromated* | | 84 |
| ,, *Phénique* | | 9 |
| Camphora | 2 to 10 grs. | 82 |
| ,, *c. Cretâ* | | 84 |
| ,, *Monobromata* | | 84 |

**Official Names in Roman; all others in Italics.**

| CA | Dose. | Page |
|---|---|---|
| Camphora *officinarum* | | 82 |
| Camphoræ Aqua | 1 to 2 oz. | 83 |
| ,, *Ceratum* | | 84 |
| ,, *Essentia* | | 84 |
| ,, Linimentum | | 83 |
| ,, ,, compositum | | 83 |
| ,, *Mistura* | | 83 |
| ,, Spiritus | 10 to 30 minims | 83 |
| ,, ,, *Fortior* | | 84 |
| ,, Tinct. composita | 15 to 60 minims | 84 |
| ,, *Unguentum* | | 84 |
| *Camphorated Oil* | | 83 |
| ,, *Vinegar* | | 84 |
| *Camphoratum Oleum* | | 83 |
| *Canella Alba* | | 84 |
| Canada Balsam. *See* Terebinthina Canadense | | 313 |
| *Cannelle* | | 109 |
| Canellæ Albæ Cortex | | 84 |
| Cannabis Indica | | 85 |
| ,, Indicæ Extractum | ¼ to 1 grain | 85 |
| ,, ,, Tinctura | 5 to 20 minims | 86 |
| ,, *Sativa* | | 85 |
| Cantharides | | 86 |
| *Cantharidine* | | 86 |
| Cantharis | | 86 |
| ,, *Vesicatoria* | | 86 |
| Cantharidis Acetum | | 86 |
| ,, Charta Epispastica | | 87 |
| ,, Emplastrum | | 87 |
| ,, ,, Calefaciens | | 87 |
| ,, *Linimentum* | | 87 |
| ,, Liquor Epispasticus | | 87 |
| ,, Tinctura | 5 to 20 minims | 87 |
| ,, Unguentum | | 87 |
| Capsici Fructus | ½ to 1 gr. | 88 |
| ,, *Gargarisma* | | 89 |
| ,, *Linimentum* | | 89 |
| ,, *Oleo-resina* | | 89 |
| ,, Tinctura | 10 to 20 minims | 88 |
| ,, ,, *Conc.* (*Turnbull's*) | | 89 |
| *Capsicin* | | 89 |
| *Capsicum fastigiatum* | | 88 |
| Caraway fruit | | 91 |
| Carbo Animalis | | 89 |
| ,, ,, purificatus | 20 to 60 grs. | 89 |
| ,, Ligni | 20 to 60 grs. | 90 |
| *Carbolate of Lime* | 2 grs. | 9 |
| Carbolic Acid | 1 to 3 grs. | 7 |
| ,, ,, *Dressing* | | 8 |
| ,, ,, *Gargle* | | 8 |

**Official Names in Roman; all others in Italics.**

| CA | Dose. | Page |
|---|---|---|
| Carbolic Acid *for subcutaneous injection* |  | 8 |
| ,, ,, *Gauze* |  | 9 |
| ,, ,, Glycerine of | 5 to 10 minims | 9 |
| ,, ,, *Inhalation* |  | 8 |
| ,, ,, *Lotion* |  | 8 |
| ,, ,, *Ointment* |  | 9 |
| ,, ,, *Plaster* |  | 9 |
| ,, ,, *Putty* |  | 9 |
| ,, ,, *Soap* |  | 278 |
| ,, ,, *Spray* |  | 8 |
| ,, ,, *Suppositories* |  | 9 |
| ,, ,, Suppositories with Soap |  | 9 |
| ,, ,, *Water* |  | 9 |
| *Carbolized Oil* |  | 8 |
| *Carbonas Calcis Depuratus* |  | 121 |
| ,, *Plumbi Venale* |  | 242 |
| *Carbonate d'Ammoniaque* |  | 39 |
| ,, *de Plomb* |  | 242 |
| Carbonate of Ammonia |  | 39 |
| ,, Bismuth |  | 68 |
| ,, Lead |  | 242 |
| ,, Lime, precipitated |  | 78 |
| ,, Lithia |  | 199 |
| ,, Magnesia |  | 204 |
| ,, Potash |  | 253 |
| ,, Soda |  | 293 |
| ,, Zinc |  | 328 |
| Carbonis Cataplasma |  | 90 |
| ,, *Liquor Detergens* |  | 120 |
| Cardamomi Tinctura composita | ½ to 2 drms. | 91 |
| ,, ,, *Simplex* |  | 91 |
| Cardamomum | 5 to 20 grs. | 91 |
| *Carmine* |  | 111 |
| *Carnis Extractum* |  | 91 |
| *Carrageen* |  | 99 |
| Carui Aqua | 1 to 2 oz. | 92 |
| ,, Fructus |  | 91 |
| ,, Oleum | 2 to 4 minims | 92 |
| *Carum Carui* |  | 91 |
| *Carvi Aetheroleum* |  | 92 |
| Caryophylli Infusum | 1 to 2 oz. | 92 |
| ,, Oleum | 1 to 4 minims | 92 |
| Caryophyllum | 5 to 10 grs. | 92 |
| *Caryophyllus Aromaticus* |  | 92 |
| Cascarillæ Cortex | 10 to 30 grs. | 93 |
| ,, Infusum | 1 to 2 oz. | 93 |
| ,, Tinctura | ½ to 2 drms. | 93 |
| *Cassia elongata* |  | 284 |
| ,, *Fistula* |  | 93 |
| ,, *lanceolata* |  | 284 |

| CA to CE | Dose. | Page |
|---|---|---|
| *Cassia obovata* | | 284 |
| Cassiæ Pulpa | Laxative, 60 to 120 grs. Purgative, 1 to 2 oz. | 93 |
| *Castor Fiber* | | 94 |
| Castor Oil | | 268 |
| Castorei Tinctura | ½ to 1 drm. | 94 |
| Castoreum | 5 to 10 grs. | 94 |
| Cataplasma *Aluminis* | | 34 |
| " Carbonis | | 90 |
| " Conii | | 116 |
| " Fermenti | | 97 |
| " Lini | | 196 |
| " *Panis* | | 136, 211 |
| " Sinapis | | 287 |
| " Sodæ Chloratæ | | 294 |
| Cataplasmata (*group*) | | 94 |
| *Cataplasme Rubifiant* | | 287 |
| Catechu, *Black* | | 96 |
| " Infusum | 1 to 2 oz. | 95 |
| " " *Comp.* | | 95 |
| " *Nigrum* | | 96 |
| " Pallidum | 10 to 30 grs. | 95 |
| " Pulvis compositus | 20 to 40 grs. | 95 |
| " Tinctura | ½ to 2 drms. | 95 |
| " Trochisci 1 gr. in each. | 1 to 6 loz. | 95 |
| *Caulophyllin* | | 347 |
| Caustic *Points* | | 55 |
| " Potash | | 249 |
| " Soda | | 289 |
| *Cephaëlis Ipecacuanha* | | 185 |
| Cera alba | | 96 |
| " flava | | 97 |
| *Ceræ Unguentum* | | 96 |
| *Cérat Simple* | | 96 |
| " *Saturné* | | 245 |
| *Ceratum Camphoræ* | | 84 |
| " *Cetacei* | | 98 |
| " *Plumbi Acetatis* | | 241 |
| " *Resinæ* | | 265 |
| Cerevisiæ Fermentum | ½ to 1 oz. | 97 |
| " Fermenti Cataplasma | | 97 |
| *Cereum Unguentum* | | 96 |
| Cerii Oxalas | 1 to 2 grs. | 97 |
| *Cerussa* | | 242 |
| Cetacei *Ceratum* | | 98 |
| " *Mistura* | | 99 |
| " Unguentum | | 98 |
| Cetaceum | 20 to 60 grs. | 98 |
| Cetraria | | 99 |
| " *Islandica* | | 99 |
| Cetrariæ Decoctum | 1 to 2 oz. | 99 |

**Official Names in Roman; all others in Italics.**

| CE to CH | Dose. | Page |
|---|---|---|
| Cevadilla | | 272 |
| Chalk | | 120 |
| „ Prepared | | 120 |
| Chamomile Flowers | | 46 |
| *Charbon Végétal* | | 90 |
| Charcoal | | 90 |
| „ Animal | | 89 |
| „ „ Purified | | 89 |
| „ *Biscuits* | | 90 |
| „ *Capsules* | | 90 |
| „ *Cautery* | | 90 |
| „ *Respirators* | | 90 |
| „ Wood | | 90 |
| *Charpie Carbonifères* | | 90 |
| Charta *Cantharidis* | | 87 |
| „ Epispastica | | 87 |
| „ *Nitrata* | | 255 |
| „ Sinapis | | 287 |
| *Chaulmugra Oil* | | 164 |
| *Chauteau's Soluble Hydrated Oxide of Iron* | | 146 |
| *Chelsea Pensioner* | | 307 |
| *Chemical Food (Parrish's)* | | 148 |
| Cherry-laurel leaves | | 193 |
| *Chien-dent* | | 320 |
| *Chinæ Infusum Frigide Paratum* | | 109 |
| „ *Tinctura* | | 107 |
| „ „ *Comp.* | | 108 |
| „ „ *Flav.* | | 107 |
| „ „ *Simplex* | | 108 |
| „ *Vinum* | | 108 |
| *Chininum Sulphuricum* | | 263 |
| Chirata | | 100 |
| Chiratæ Infusum | 1 to 2 oz. | 100 |
| „ Tinctura | 15 to 60 minims | 100 |
| Chiretta | | 100 |
| Chloral Hydras | 5 to 20 grs. | 100 |
| „ Syrup | ½ to 2 drms. | 101 |
| *Chloras Kalicus* | | 254 |
| *Chlor-alum* | | 34 |
| „ *Hydratum Crystal.* | | 101 |
| Chlorate of Potash | | 253 |
| *Chlore Dissous* | | 102 |
| *Chloretum Hydrargyrosum* | | 176 |
| „ *Amido-hydrargyricum* | | 177 |
| „ *Zincicum* | | 329 |
| *Chlorhydrate de Morphine* | | 215 |
| *Chlorhydric Acid* | | 12 |
| Chlori Liquor | 10 to 20 minims | 102 |
| „ Vapor. *Vide* Calx Chlorata | | 77 |
| *Chloric Æther* | | 104 |

| CH to CI | Dose. | Page |
|---|---|---|
| Chloride of Ammonium | | 36 |
| ,, ,, *Draught* | | 36 |
| ,, ,, *Lotion* | | 36 |
| ,, *of Aluminium* | | 34 |
| ,, of Ammonium *Lozenges* | | 36 |
| ,, of Calcium | | 76 |
| ,, ,, *in Crystals* | | 76 |
| ,, of Sodium | | 297 |
| ,, of Zinc | | 329 |
| ,, ,, *points* | | 330 |
| Chlorinated Lime | | 76 |
| *Chlorinii Aqua* | | 102 |
| Chloroform | | 103 |
| Chloroformi Aqua | ½ to 2 oz. | 104 |
| ,, Linimentum | | 104 |
| ,, *Liquor Camphoratus* | | 104 |
| ,, ,, *compositus* | | 104 |
| ,, *Mistura c. Ammoniâ* | | 104 |
| ,, Spiritus | 10 to 60 minims | 104 |
| ,, Tinct. comp. | 20 to 60 minims | 104 |
| ,, *Unguentum* | | 104 |
| ,, *Vapor* | | 104 |
| Chloroformum | 1 to 5 minims | 103 |
| ,, *Aconiti* | | 24 |
| ,, *Belladonnæ* | | 66 |
| ,, *Hyoscyami* | | 179 |
| ,, *Purificatum* | | 103 |
| ,, *Purum* | | 103 |
| *Chlorum Solutum* | | 102 |
| *Chlorure de Zinc* | | 329 |
| *Chloruretum Calcis* | | 77 |
| ,, *Zinci* | | 329 |
| *Cholera Mixture* | | 121 |
| *Chondodendron tomentosum* | | 232 |
| *Christison's Pill* | | 115 |
| *Chromic Acid* | | 10 |
| ,, *Solution. French* | | 10 |
| *Chrysarobine* | | 53 |
| *Chrysophanic Acid* | | 10 |
| ,, ,, *Ointment* | | 10, 53 |
| *Cimicifugin* | 1 to 4 grs. | 25 |
| *Cimolite* | | 33 |
| Cinchona | | 105 |
| ,, *Calisaya* | | 106 |
| ,, *Condaminea* | | 108 |
| ,, *Cordifolia* | | 106 |
| ,, *Government Febrifuge* | | 106 |
| ,, *Lancifolia* | | 262 |
| ,, *Oblongifolia* | | 109 |
| ,, *Succirubra* | | 109 |

**Official Names in Roman; all others in Italics.**

| CI to CO | Dose. | Page |
|---|---|---|
| Cinchonæ Decoctum | 1 to 2 oz. | 107 |
| ,, Extractum liquidum | 10 to 30 minims | 107 |
| ,, Flavæ Cortex | Tonic, 15 grs. Antiperiodic, 60 to 120 grs. | 106 |
| ,, *Haustus Comp.* | | 108 |
| ,, Infusum | 1 to 2 oz. | 107 |
| ,, *Mistura Compositus* | | 108 |
| ,, ,, *c. Acido* | | 108 |
| ,, Pallidæ Cortex | 10 to 60 grs. | 108 |
| ,, Rubræ Cortex | | 109 |
| ,, Tinctura | ½ to 2 drms. | 107 |
| ,, ,, *Huxham's* | | 108 |
| ,, ,, composita | ½ to 2 drms. | 108 |
| *Cinchonidine, Sulphate of* | | 106 |
| *Cinchonine, Sulphate of* | | 106 |
| Cinnamomi Aqua | 1 to 2 oz. | 109 |
| ,, Cortex | 10 to 20 grs. | 109 |
| ,, Oleum | 1 to 4 minims | 110 |
| ,, Pulvis compositus | 3 to 10 grs. | 110 |
| ,, Tinctura | ½ to 2 drms | 110 |
| *Cinnamomum Zeylanicum* | | 109 |
| ,, *Ceylonicum* | | 109 |
| *Cire* | | 97 |
| ,, *Blanche* | | 96 |
| *Cissampelos Pareira* | | 232 |
| *Citrate de Fer Ammoniacal* | | 140 |
| ,, *of Caffeine* | | 75 |
| Citrate of Iron and Ammonia | | 140 |
| ,, ,, Quinine | | 141 |
| ,, Lithia | | 199 |
| ,, Potash | | 254 |
| Citric Acid | | 10 |
| *Citrullus Colocynthis* | | 114 |
| *Citrus Aurantium* | | 60 |
| ,, *Bigaradia* | | 60 |
| ,, *Limetta* | | 10 |
| ,, *Limonum* | | 194 |
| Clarified Honey | | 208 |
| *Claviceps Purpurea* | | 131 |
| *Clover* | | 320 |
| Cloves | | 92 |
| *Clutton's Febrifuge Spirit* | | 28 |
| *Coca* | | 110 |
| Cocci Tinctura | 30 to 90 minims | 111 |
| *Coccionella* | | 110 |
| Coccus | | 110 |
| *Coccus Cacti* | | 110 |
| Cochineal | | 110 |
| *Cochenille* | | 110 |
| *Cochlearia Armoracia* | | 56 |
| Cod Liver Oil | | 215 |

**Official Names in Roman; all others in Italics.**

| CO | Dose. | Page |
|---|---|---|
| *Codeia* | | 223 |
| *Codeiæ Syrupus* | | 229 |
| Colchici Cormus | 2 to 8 grs. | 111 |
| ,, Extractum | ½ to 2 grs. | 112 |
| ,, ,, Aceticum | ½ to 2 grs. | 112 |
| ,, *Mistura* | | 112 |
| ,, ,, *Alkalina* | | 113 |
| ,, ,, *Aperiens* | | 113 |
| ,, Semina | | 112 |
| ,, Seminum Tinctura | 10 to 30 minims | 112 |
| ,, *Tinctura composita* | | 113 |
| ,, ,, *Florum* | | 113 |
| ,, Vinum | 10 to 30 minims | 112 |
| ,, ,, *Seminum* | | 113 |
| *Colchicum autumnale* | | 111 |
| *Cold Cream* | | 96 |
| Collodion | | 113 |
| ,, *Hæmostatic* | | 114 |
| Collodium | | 113 |
| ,, *Elasticum* | | 113 |
| ,, Flexile | | 113 |
| *Colloid Styptic* | | 114 |
| *Collyrium Ammoniæ Acetatis* | | 38 |
| ,, *Cupri Sulph* | | 125 |
| ,, *Hydrargyri* | | 175 |
| Colocynthidis Extractum compositum | 2 to 5 grs. | 114 |
| ,, Pilula composita | 5 to 10 grs. | 114 |
| ,, ,, et Hyoscyami | 5 to 10 grs. | 115 |
| ,, Pulpa | 2 to 8 grs. | 114 |
| ,, *Tinctura* | | 115 |
| *Colombo Extract* | | 81 |
| ,, *Tincture* | | 81 |
| *Coloquinte* | | 114 |
| *Come's Frères Arsenical Paste* | | 6 |
| *Comfrey Root* | | 309 |
| Common Salt | | 297 |
| ,, *Marigold* | | 80 |
| *Concombre Sauvage* | | 129 |
| *Condy's Fluid* | | 256 |
| Confectio *Amygdalæ*. *See* Pulv. Amygd. Comp. | | 43 |
| ,, *Aromatica* (Pulv. Cretæ Arom.). *See* Pulvis Cretæ Aromaticus | | 121 |
| ,, Opii | 5 to 20 grs. | 225 |
| ,, Piperis | 60 to 120 grs. | 238 |
| ,, Rosæ Caninæ | 1 drm. | 269 |
| ,, ,, Gallicæ | ½ to 1 drm. | 270 |
| ,, *Rutæ* | | 271 |
| ,, Scammonii | 10 to 30 grs. | 280 |
| ,, Sennæ | 60 to 120 grs. | 284 |
| ,, Sulphuris | 1 to 2 drms. | 307 |
| ,, Terebinthinæ | 1 to 4 drms. | 314 |

| CO to CR | Dose. | Page |
|---|---|---|
| *Confectiones (group)* | | 115 |
| Conii Cataplasma | | 116 |
| ,, Extractum | 2 to 8 grs. | 116 |
| ,, ,, *Siccum* | | 116 |
| ,, Folia | 2 to 8 grs. | 115 |
| ,, Fructus | | 117 |
| ,, *Liniment* | | 117 |
| ,, *Mist. c. Hyoscyamo* | | 117 |
| ,, Pilula composita | 5 to 10 grs. | 116 |
| ,, Succus | 30 to 60 minims | 116 |
| ,, Tinctura | ½ to 1 drm. | 117 |
| ,, Vapor | | 116 |
| *Conium maculatum* | | 115, 117 |
| *Conserva Amygdalarum. See* Pulv. Amygd. comp. | | 43 |
| ,, *Cynorrhodi* | | 269 |
| *Consoude* | | 309 |
| *Convolvulus Scammonia* | | 280 |
| Copaiba | 20 to 60 minims | 117 |
| ,, *Extract* | | 118 |
| ,, *Mistura* | | 118 |
| ,, Oleum | 5 to 20 minims | 118 |
| *Copahu* | | 117 |
| *Copaifera multijuga* | | 117 |
| Copaiva | | 117 |
| ,, Oil of | | 118 |
| *Copper* | | 124 |
| *Coquelicot* | | 268 |
| Coriander Fruit | | 118 |
| Coriandri Fructus | 20 to 60 grs. | 118 |
| ,, Oleum | 1 to 4 minims | 118 |
| *Coriandrum Sativum* | | 118 |
| *Cornin* | | 347 |
| *Corrosive Sublimate* | | 174 |
| *Corydalin* | | 347 |
| *Cosmoline* | | 324 |
| *Cosso* | | 126 |
| Cotton, *Medicated pledgets of* | | 346 |
| ,, Wool | | 160 |
| ,, *Wool free from Grease* | | 160 |
| ,, ,, *Respirators of* | | 160 |
| *Court Plaster* | | 180 |
| *Cream of Tartar* | | 257 |
| ,, ,, *Soluble* | | 258 |
| Creasote | | 118 |
| Creasoti *Aqua* | | 120 |
| ,, Mistura | 1 to 2 ozs. | 119 |
| ,, ,, *c. Opio* | | 120 |
| ,, Unguentum | | 120 |
| ,, Vapor | | 120 |
| Creasotum | 1 to 3 minims | 118 |

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| CR to DA | Dose. | Page |
|---|---|---|
| *Creeping Couch Grass* | | 320 |
| *Cremor Frigidus* | | 96 |
| ,, *Lithargyri* | | 245 |
| Creta | | 120 |
| ,, Præparata | 10 to 60 grs. | 120 |
| Cretæ Mistura | 1 to 2 oz. | 121 |
| ,, ,, *c. Opio* | | 121 |
| ,, Pulvis Aromaticus | 30 to 60 grs. | 121 |
| ,, ,, ,, cum Opio | 10 to 40 grs. | 121 |
| ,, *Unguentum* | | 122 |
| Croci Tinctura | ½ to 2 drms. | 122 |
| Crocus | | 122 |
| ,, *of Mars* | | 146 |
| ,, *Sativus* | | 122 |
| *Croton Eluteria* | | 93 |
| Croton Oil | | 122 |
| ,, ,, *Pencils* | | 123 |
| ,, ,, *Pills* | | 123 |
| ,, *Tiglium* | | 122 |
| *Croton-chloral Hydrate* | 1 to 2 grs. | 101 |
| Crotonis Linimentum | | 123 |
| ,, Oleum | ⅓ to 1 minim | 122 |
| *Cryptopia* | | 224 |
| *Cubeba officinalis* | | 123 |
| Cubeba | 1 to 2 drms. | 123 |
| Cubebæ Oleum | 5 to 20 minims | 123 |
| ,, Tinctura | 1 to 2 drms. | 123 |
| Cupri *Pilula Comp.* | | 125 |
| ,, Sulphas | ½ gr.—10 grs. an emetic | 124 |
| ,, *Sulphatis Collyrium* | | 125 |
| ,, ,, *Haustus* | | 125 |
| ,, ,, *Injectio* | | 124 |
| ,, ,, *Lotio* | | 124 |
| *Cuprum* | | 124 |
| ,, *Aluminatum* | | 125 |
| *Curara* | | 125 |
| Curd Soap | | 276 |
| Cuspariæ Cortex | 10 to 40 grs. | 125 |
| ,, Infusum | 1 to 2 oz. | 126 |
| Cusso | ¼ to ½ oz. | 126 |
| ,, Infusum | 4 oz. | 126 |
| *Cutch* | | 96 |
| *Cyanhydric Acid* | | 13 |
| *Cydonii Vulgaris* | | 126 |
| *Cydonii Decoctum* | | 126 |
| *Cydonium* | | 126 |
| *Cynorrhodi Conserva* | | 269 |
| *Cynorrhodons* | | 269 |
| *Cypripedin* | | 347 |
| *Damson, Mountain* | | 268 |

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| DA to DI | | Dose. | Page |
|---|---|---|---|
| Dandelion Root | | | 312 |
| *Daphne Gnidium* | | | 211 |
| ,, | *Laureola* | | 210 |
| ,, | *Mezereum* | | 210 |
| *Datura Stramonium* | | | 303 |
| *Daturine* | | | 303 |
| *Daturinæ Guttæ* | | | 303 |
| *Deadly Nightshade* | | | 64 |
| *Decocta (group)* | | | 126 |
| Decoctum | *Alchemillæ Arvensis* | | 29 |
| ,, | Aloes compositum | ½ oz. to 2 oz. | 31 |
| ,, | *Amyli* | | 44 |
| ,, | Cetrariæ | 1 to 2 oz. | 99 |
| ,, | Cinchonæ | 1 to 2 oz. | 107 |
| ,, | *Cydonii* | | 126 |
| ,, | *Dulcamaræ* | | 129 |
| ,, | *Gallæ* | | 155 |
| ,, | Granati | 1 to 2 oz. | 161 |
| ,, | *Gummi Rubri* | | 163 |
| ,, | Hæmatoxyli | 1 to 2 oz. | 165 |
| ,, | Hordei | | 167 |
| ,, | Papaveris | | 231 |
| ,, | ,, *concentratum* | | 231 |
| ,, | Pareiræ | 1 to 2 oz. | 232 |
| ,, | Quercus | 1 to 2 oz. | 261 |
| ,, | ,, *aluminatum* | | 261 |
| ,, | *Rhamni Frangulæ* | | 265 |
| ,, | *Ricini Foliorum* | | 269 |
| ,, | Sarsæ | 10 to 20 oz. } per diem | 278 |
| ,, | ,, compositum | 10 to 20 oz. | |
| ,, | Scoparii | 2 to 4 oz. | 283 |
| ,, | Taraxaci | 2 to 4 oz. | 313 |
| ,, | *Tritici Repentis* | | 320 |
| ,, | Ulmi | 2 to 4 oz. | 321 |
| ,, | *Uvæ Ursi* | | 322 |
| *Depilatory* | | | 297 |
| *Dethan's Pastilles* | | | 254 |
| *Deutochlorure de Mercure Sublimé* | | | 174 |
| *Deutoiodure de Mercure* | | | 170 |
| *Dewar's Spray Producer* | | | 20 |
| *De Valangin's Solution* | | | 6 |
| *Dextrotartaric Acid* | | | 22 |
| *Dialysed Iron* | | | 145 |
| Digitalin | | | 127 |
| *Digitalina* | | | 127 |
| Digitalinum | | | 127 |
| Digitalis Folia | | ½ to 2 grs. | 127 |
| ,, | Infusum | ¼ to ½ oz. | 128 |
| ,, | *Pilula Comp.* | | 128 |
| ,, | *purpurea* | | 127 |

| DI to EM | Dose. | Page |
|---|---|---|
| Digitalis *Succus* | | 128 |
| „ Tinctura | 10 to 30 minims | 128 |
| Dill Fruit | | 45 |
| *Diosma* | | 73 |
| *Diplolepis Gallæ-Tinctoriæ* | | 154 |
| Distilled Water | | 52 |
| Dog-Rose Fruit | | 269 |
| *Dolomite* | | 202 |
| *Donovan's Solution* (*Arsenic*) | | 6 |
| *Dorema Ammoniacum* | | 34 |
| *Douce-amère* | | 129 |
| *Dover's Powder* | | 186 |
| *Draught. See Haustus in Index* | | 421 |
| *Duboisia Myopoides* | | 128 |
| *Duboisine, Sulphate of* | | 128 |
| *Dugong Oil* | | 128 |
| Dulcamara | | 129 |
| Dulcamaræ Infusum | 1 to 2 oz. | 129 |
| *Easton's Syrup* | | 148 |
| *Eau Camphrée* | | 83 |
| „ *de Cannelle* | | 109 |
| „ *de Chaux* | | 79 |
| „ *de Goudron* | | 239 |
| „ *de Laitue* | | 192 |
| „ *de Luce* | | 41 |
| „ *distillée de Fleur d'Oranger* | | 60 |
| Ecbalii Fructus | | 129 |
| *Ecbalium Agreste* | | 129 |
| „ *officinarum* | | 129 |
| *Eclectic Remedies* | | 347 |
| *Écorce de Chêne* | | 261 |
| Egg Albumen | | 28 |
| „ Yolk of | | 229 |
| *Elaterii Pilula* | | 130 |
| „ „ *Comp.* | | 130 |
| „ Pulvis Compositus | $\frac{1}{2}$ to 5 grs. | 130 |
| *Elaterine* | | 129 |
| Elaterium | $\frac{1}{16}$ to $\frac{1}{2}$ gr. | 129 |
| Elder Flowers | | 274 |
| *Electuarium Sennæ* | | 284 |
| Elemi | | 130 |
| „ Unguentum | | 130 |
| *Elettaria Cardamomum* | | 91 |
| *Elixir Glycyrrhizæ* | | 160 |
| „ *Paregoric* | | 84 |
| „ *Pectorale Regis Danicæ* | | 160 |
| „ *of Vitriol* | | 19 |
| „ „ *Mynsicht's* | 5 to 10 minims | 19 |
| Elm Bark | | 321 |
| *Emetina* | | 185 |

**Official Names in Roman; all others in Italics.**

| EM to ES | Dose. | Page |
|---|---|---|
| *Emplastra* (*group*) | | 130 |
| Emplastrum *Acidi Carbolici* | | 9 |
| ,, Ammoniaci cum Hydrargyro | | 168 |
| ,, Belladonnæ | | 65 |
| ,, Calefaciens | | 87 |
| ,, Cantharidis | | 87 |
| ,, Cerati Saponis | | 277 |
| ,, *Diachylon Simplex* | | 243 |
| ,, Ferri | | 146 |
| ,, Galbani | | 153 |
| ,, Hydrargyri | | 168 |
| ,, *Lithargyri. See* Empl. Plumbi | | 243 |
| ,, Opii | | 225 |
| ,, Picis | | 239 |
| ,, ,, *cum Cantharide* | | 87 |
| ,, ,, *irritans* | | 239 |
| ,, Plumbi | | 243 |
| ,, ,, Iodidi | | 242 |
| ,, Resinæ | | 264 |
| ,, *Roborans. See* Empl. Ferri | | 146 |
| ,, Saponis | | 277 |
| ,, *Saponatum* | | 277 |
| ,, *Thuris. See* Empl. Ferri | | 146 |
| Emplâtre *de Canet* | | 147 |
| *Emulsio Amygdalæ* | | 43 |
| ,, *Ricini Olei* | | 269 |
| *Émulsion Purgative avec la Scammonée* | | 281 |
| ,, *Simple* | | 43 |
| Enema Aloes Barbadensis | | 29 |
| ,, ,, Socotrinæ | | 31 |
| ,, Assafœtidæ | | 58 |
| ,, *Lini* | | 197 |
| ,, Magnesiæ Sulphatis | | 206 |
| ,, Opii | | 226 |
| ,, *Rutæ* | | 271 |
| ,, Tabaci | | 312 |
| ,, Terebinthinæ | | 314 |
| *Enemata* (*group*) | | 131 |
| *Epsom Salt* | | 205 |
| *Ergot de Seigle* | | 132 |
| Ergota | 20 to 30 grs. | 131 |
| Ergotæ Extractum liquidum | 10 to 60 minims | 132 |
| ,, Infusum | 1 to 2 oz. | 133 |
| ,, *Mistura Comp.* | | 133 |
| ,, Tinctura | 15 to 60 minims | 133 |
| *Ergotine* | | 133 |
| *Erigerontis Canadensis Oleum* | | 133 |
| *Erythroxylon Coca* | | 110 |
| *Eserine* | | 235 |
| ,, *Sulphate of* | | 235 |

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| ES to EX | Dose. | Page |
|---|---|---|
| *Eserine Drops for the eye* | | 236 |
| *Esprit de Nitre Dulcifié* | | 300 |
| Essence of Peppermint | | 209 |
| Essentia Anisi | 10 to 20 minims | 46 |
| ,, *Camphoræ* | | 84 |
| ,, Menthæ Piperitæ | 10 to 20 minims | 209 |
| ,, *Rosmarini* | | 271 |
| ,, *Zingiberis* | | 333 |
| Ether | | 27 |
| ,, Acetic | | 26 |
| ,, *Inhaler* | | 26 |
| ,, Pure | | 28 |
| ,, *Sulphuric* | | 27 |
| *Eucalyptus Globulus* | | 133 |
| ,, *Rostrata* | | 163 |
| *Eugenia Pimenta* | | 237 |
| *Euonymin* | | 347 |
| *Euryangium Sumbul* | | 308 |
| *Exogonium Purga* | | 187 |
| *Extract of Malt* | | 73 |
| ,, *Meat* | | 91 |
| *Extracta (group)* | | 134 |
| Extractum Aconiti | 1 to 2 grs. | 23 |
| ,, *Aconiti Rad. Alcoholic* | | 24 |
| ,, Aloes Barbadensis | ½ to 2 grs. | 29 |
| ,, ,, Socotrinæ | 1½ to 3 grs. | 31 |
| ,, Anthemidis | 2 to 10 grs. | 46 |
| ,, Belæ liquidum | 1 to 2 drms. | 64 |
| ,, Belladonnæ | ¼ to ½ gr. | 65 |
| ,, *Bynes* | | 73 |
| ,, Calumbæ | 2 to 10 grs. | 81 |
| ,, Cannabis Indicæ | ¼ to 1 gr. | 85 |
| ,, *Carnis* | | 91 |
| ,, Cinchonæ Flavæ liquidum | 10 to 30 minims | 107 |
| ,, Colchici | ½ to 2 grs. | 112 |
| ,, ,, Aceticum | ½ to 2 grs. | 112 |
| ,, Colocynthidis compositum | 2 to 5 grs. | 114 |
| ,, *Colombo* | | 81 |
| ,, Conii | 2 to 8 grs. | 116 |
| ,, *Copaibæ* | | 118 |
| ,, Ergotæ liquidum | 10 to 60 minims | 132 |
| ,, *Fabæ Calabaricæ* | | 235 |
| ,, Filicis liquidum | 60 to 80 minims | 152 |
| ,, ,, *Maris Æthereum* | | 152 |
| ,, *Fuci Vesiculosi Liquidum* | | 153 |
| ,, Gentianæ | 5 to 15 grs. | 156 |
| ,, ,, *Fluidum* | | 156 |
| ,, Glycyrrhizæ | ½ to 1 drm. | 159 |
| ,, ,, liquidum | 1 drm. | 159 |
| ,, *Gummi Rubri Liquidum* | | 163 |

| EX to FE | Dose. | Page |
|---|---|---|
| Extractum Hæmatoxyli | 10 to 30 grs. | 165 |
| ,, *Hellebori Nigri* | | 166 |
| ,, Hyoscyami | 3 to 6 grs. | 178 |
| ,, ,, *fluidum* | | 179 |
| ,, *Ignatiæ Amaræ* | | 181 |
| ,, Jalapæ | 5 to 15 grs. | 187 |
| ,, Krameriæ | 5 to 20 grs. | 191 |
| ,, Lactucæ | 5 to 10 grs. | 192 |
| ,, *Liquiritiæ* | | 159 |
| ,, Lupuli | 5 to 10 grs. | 201 |
| ,, *Lupulinæ* | | 202 |
| ,, *Malti* | | 73 |
| ,, Mezerei Æthereum | | 210 |
| ,, ,, *Fluidum* | | 211 |
| ,, Nucis Vomicæ | $\frac{1}{3}$ to 1 gr. | 220 |
| ,, Opii | $\frac{1}{2}$ to 1 gr. | 226 |
| ,, ,, liquidum | 10 to 40 minims | 226 |
| ,, Papaveris | 2 to 5 grs. | 231 |
| ,, ,, *liquidum* | | 231 |
| ,, Pareiræ | 10 to 20 grs. | 232 |
| ,, ,, liquidum | $\frac{1}{2}$ to 2 drms. | 232 |
| ,, Physostigmatis | $\frac{1}{16}$ to $\frac{1}{4}$ gr. | 235 |
| ,, Quassiæ | 3 to 5 grs. | 260 |
| ,, *Rhamni Frangulæ Liquid* | | 265 |
| ,, Rhei | 3 to 6 grs. | 266 |
| ,, ,, *Comp.* | | 268 |
| ,, Sarsæ liquidum | 1 to 4 drms. | 279 |
| ,, ,, *comp. liquidum* | | 279 |
| ,, *Secalis Cornuti* | | 133 |
| ,, Stramonii | $\frac{1}{4}$ gr. | 303 |
| ,, *Strychni Aquosum* | | 220 |
| ,, ,, *Spirituosum* | | 220 |
| ,, Taraxaci | 5 to 15 grs. | 313 |
| ,, *Vincæ Majoris Liquidum* | | 327 |
| *Extrait Alcoolique de Houblon* | | 201 |
| ,, *Ethéré de Garou* | | 211 |
| ,, ,, *de Fougère Mâle* | | 152 |
| ,, *de Fiel de Bœuf* | | 136 |
| ,, *de Réglisse* | | 159 |
| *Faba Calabarica* | | 236 |
| *Facsimileograph* | | 180 |
| Farina Tritici | | 136 |
| Fel Bovinum purificatum | 3 to 6 grs. | 136 |
| ,, *Tauri Depuratum* | | 136 |
| ,, ,, ,, *Siccum* | | 136 |
| ,, ,, *inspissatum* | | 136 |
| Fennel | | 152 |
| Fermentum Cerevisiæ | | 97 |
| Ferri Acetatis Tinctura | 5 to 30 minims | 137 |
| ,, ,, ,, *Etherea* | | 137 |

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| FE | Dose. | Page |
|---|---|---|
| Ferri *Acetici Liquor* | | 137 |
| ,, *Ammonio-chloridi Tinctura* | | 145 |
| ,, Arsenias | $\frac{1}{16}$ to $\frac{1}{2}$ gr. | 138 |
| ,, *Bromidi Solutio* | | 138 |
| ,, ,, *Syrupus* | | 138 |
| ,, Carbonas saccharata | 5 to 20 grs. | 138 |
| ,, Carbonatis Pilula | 5 to 20 grs. | 140 |
| ,, *Chlorati Tinctura* | | 144 |
| ,, *Chloridi Tinctura* | | 144 |
| ,, *Chloroxydi Liquor* | | 145 |
| ,, Citratis Vinum | 1 to 4 drms. | 140 |
| ,, Emplastrum | | 146 |
| ,, et Ammoniæ Citras | 5 to 10 grs. | 140 |
| ,, ,, ,, *Citratis Haustus* | | 140 |
| ,, ,, Quiniæ Citras | 5 to 10 grs. | 141 |
| ,, ,, ,, *Mist. Efferv.* | | 141 |
| ,, ,, ,, *Syrup* | | 1 |
| ,, *Iodidi Liquor* | | 142 |
| ,, Iodidi Pilula | 3 to 8 grs. | 142 |
| ,, ,, Syrupus | 20 to 60 minims | 142 |
| ,, Iodidum | 1 to 5 grs. | 141 |
| ,, *Liquor Dialysatus* | | 145 |
| ,, Mistura Comp. | 1 to 2 oz. | 139 |
| ,, ,, Aromatica | 1 to 2 oz. | 143 |
| ,, ,, *Laxans* | | 149 |
| ,, *Nitratis Liquor* | | 145 |
| ,, Oxidum Magneticum | 5 to 10 grs. | 143 |
| ,, ,, *Nigrum. See* Ferri Ox. Magneticum | | 143 |
| ,, Perchloridi Liquor | 10 to 30 minims | 144 |
| ,, ,, ,, fortior | | 143 |
| ,, ,, Tinct. | 10 to 30 minims | 144 |
| ,, Pernitratis Liquor | 10 to 40 minims | 145 |
| ,, Peroxidum Humidum | | 145 |
| ,, ,, Hydratum | 5 to 30 grs. | 146 |
| ,, Persulphatis Liquor | | 149 |
| ,, Phosphas | 5 to 10 grs. | 147 |
| ,, Phosphatis Syrupus | 1 to 4 drms. | 147 |
| ,, ,, *c. Manganesio Syrupus* | | 148 |
| ,, ,, *c. Quiniâ et Strychniâ Syrupus (Easton's)* | | 148 |
| ,, ,, *Syrupus comp. (Parrish)* | | 148 |
| ,, *Potassio-tartras. See* Ferrum Tartaratum | | 151 |
| ,, *Pulvis. See* Ferrum Redactum | | 150 |
| ,, Redacti *Pilula* | | 151 |
| ,, ,, Trochisci, 1 gr. each | 1 to 6 loz. | 150 |
| ,, *Sesquichloridi Tinctura. See* Tinct. Ferri Perchlor. | | 144 |
| ,, *Solutio Chlorati Spirituosa* | | 144 |
| ,, Sulphas | 1 to 5 grs. | 148 |
| ,, ,, exsiccata | $\frac{1}{2}$ to 3 grs. | 149 |
| ,, ,, granulata | 1 to 5 grs. | 149 |
| ,, *Sulphatis Lotio* | | 149 |

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| FE to GA | Dose. | Page |
|---|---|---|
| Ferri Vinum | 1 to 4 drms. | 151 |
| *Ferrocyanide of Potassium* | | 256 |
| *Ferrier's Snuff* | | 70 |
| *Ferroso-ferric Oxide* | | 143 |
| Ferrum | | 137 |
| ,, *Carbonicum Saccharatum* | | 139 |
| ,, *Citricum Ammoniatum* | | 140 |
| ,, ,, *Oxydatum Ammoniatum* | | 140 |
| ,, *Iodatum Saccharatum* | | 142 |
| ,, *Kalio Tartaricum* | | 151 |
| ,, *Oxydato-oxydulatum* | | 143 |
| ,, *Oxydatum Hydratum* | | 146 |
| ,, Redactum | 1 to 5 grs. | 150 |
| ,, Tartaratum | 5 to 10 grs. | 151 |
| *Ferula Galbaniflua* | | 153 |
| ,, *Narthex* | | 58 |
| Fetid Spirit of Ammonia | | 41 |
| Ficus | | 151 |
| ,, *Carica* | | 151 |
| *Fiel de Bœuf* | | 136 |
| Fig | | 151 |
| Filicis *Extractum* | | 152 |
| ,, Extractum liquidum | 60 to 80 minims | 152 |
| ,, *Mistura* | | 152 |
| ,, *Oleoresina* | | 152 |
| Filix Mas | 60 to 180 grs. | 152 |
| *Fir-wool Oil, Lairitz's* | | 240 |
| *Fish Glue* | | 180 |
| *Flax* | | 196 |
| *Flores Rosæ* | | 269 |
| Flour | | 136 |
| *Flowers of Benzoin* | | 6 |
| *Fluid Magnesia* | | 204 |
| Fœniculi Aqua | 1 to 2 oz. | 153 |
| ,, Fructus | | 152 |
| *Fœniculum dulce* | | 152 |
| *Formyl, Terchloride of* | | 103 |
| *Fougère* | | 152 |
| *Fousel Oil* | | 29 |
| *Fowler's Solution* | | 5 |
| *Foxglove* | | 127 |
| Frankincense | | 316 |
| *Fraxinus Ornus* | | 207 |
| ,, *Rotundifolia* | | 207 |
| *Frères Come's Arsenical Paste* | | 6 |
| *Friar's Balsam* | | 67 |
| *Fucus Vesiculosus, Extract. liquid.* | | 153 |
| *Fuller's Earth* | | 33 |
| *Gadus Morrhua* | | 215 |
| Galbanum | | 153 |

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| GA to GE | Dose. | Page |
|---|---|---|
| Galbani Emplastrum | | 153 |
| ,, *Pilula Comp.* *See* Assafœtidæ Pilula composita | | 58 |
| ,, *Unguentum Comp.* | | 154 |
| *Galena* | | 240 |
| *Galipea Cusparia* | | 125 |
| Galla | 10 to 20 grs. | 154 |
| Gallæ *Decoctum* | | 155 |
| ,, *Suppositoria* | | 155 |
| ,, Tinctura | ½ to 2 drms. | 154 |
| ,, Unguentum | | 155 |
| ,, ,, c. Opio | | 155 |
| Gallic Acid | 3 to 10 grs. 10 to 60 in albuminuria | 11 |
| ,, ,, Glycerine of | 10 to 60 minims | 12 |
| *Gallus Bankiva* | | 229 |
| Gamboge | | 81 |
| *Gambogia* | | 81 |
| *Garcinia Morella* | | 81 |
| ,, *Purpurea* | | 155 |
| *Gargarisma Acid. Carbolici* | | 8 |
| ,, *Aluminis* | | 34 |
| ,, *Boracis* | | 72 |
| ,, *Capsici* | | 89 |
| ,, *Hydrargyri* | | 175 |
| ,, *Iodi* | | 184 |
| ,, *Myrrhæ* | | 219 |
| ,, *Plumbi* | | 245 |
| ,, *Potassæ Chloratis* | | 254 |
| ,, ,, *Nitratis* | | 255 |
| *Gaskoin's Solution* | | 6 |
| *Gelatine* | | 180 |
| ,, *Atropine* | | 59 |
| ,, *Calabar* | | 235 |
| *Gelatum Petrolii* | | 324 |
| *Gelsemii Tinctura* | | 155 |
| *Gelsemin* | | 347 |
| *Gelsemium* | | 155 |
| ,, *sempervirens* | | 155 |
| *Genêt* | | 282 |
| *Gentiana Lutea* | | 156 |
| Gentianæ Extractum | 5 to 15 grs. | 156 |
| ,, ,, *Fluidum* | | 156 |
| ,, Infusum comp. | 1 to 2 oz. | 156 |
| ,, Mistura | ½ to 1 oz. | 156 |
| ,, ,, *Alkalina* | | 157 |
| ,, ,, *et Sennæ* | | 157 |
| ,, Radix | 10 to 40 grs. | 156 |
| ,, *Tinctura* | | 157 |
| ,, ,, composita | 1 to 2 drms. | 156 |
| *Gentianine* | | 156 |
| *Geranin* | | 347 |

| GE to GR | Dose. | Page |
|---|---|---|
| *Getchel's Charcoal Cautery* | | 90 |
| *Gingembre* | | 332 |
| Ginger | | 332 |
| *Girofles* | | 92 |
| Glacial Acetic Acid | | 4 |
| *Glauber Salt* | | 296 |
| *Glycéré d'Amidon* | | 44 |
| Glycerine | | 157 |
| „ *and Lime Juice* | | 43 |
| „ *Cream for Chilblains* | | 158 |
| „ „ *with Camphor* | | 158 |
| „ *group* | | 158 |
| „ *Ointment* | | 158 |
| „ *Pessary* | | 158 |
| „ *Soap* | | 278 |
| „ *with Rose Water* | | 158 |
| *Glycerini Unguentum* | | 44 |
| Glycerinum | 10 to 60 minims | 157 |
| „ Acidi Carbolici | 5 to 10 minims | 9 |
| „ „ Gallici | 10 to 60 minims | 12 |
| „ „ Tannici | 10 to 40 minims | 21 |
| „ Amyli | | 44 |
| „ Boracis | | 71 |
| „ *Iodi* | | 245 |
| „ *Plumbi Subacetatis* | | 245 |
| „ *Sodii Boratis* | | 72 |
| *Glycerole of Hypophosphites* | | 158 |
| *Glycyrrhiza Glabra* | | 159 |
| „ *Echinatæ Radix* | | 159 |
| „ *Elixir* | | 160 |
| Glycyrrhizæ Extractum | | 159 |
| „ „ Liquidum | 1 drm. | 159 |
| „ Pulvis Compositus | 30 to 60 grs. | 159 |
| „ Radix | | 159 |
| *Gun Powder* | | 53, 160 |
| *Gold-beater's Skin* | | 180 |
| *Golden Syrup* | | 315 |
| *Gomme-Gutte* | | 82 |
| *Gossypii Radicis Tinctura* | | 160 |
| Gossypium | | 160 |
| *Goudron Végétal* | | 239 |
| *Government Cinchona Febrifuge* | | 106 |
| Granati Radicis Cortex | | 160 |
| „ „ Decoctum | 1 to 2 oz. | 161 |
| Granulated *preparations* | | 345 |
| „ Citro-tartrate of Soda | | 294 |
| „ Sulphate of Iron | | 149 |
| „ Zinc | | 327 |
| *Grape Vine* | | 323 |
| Green Hellebore Root | | 325 |

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|---|---|---|
| *Greenheart Tree* | | 219 |
| Green Iodide of Mercury | | 170 |
| *Gregory's Pill* | | 115 |
| *Gregory's Powder* | | 267 |
| *Grenadier* | | 161 |
| *Grey Powder* | | 177 |
| *Grindelia Robusta* | | 161 |
| ,, *Squarrosa* | | 161 |
| *Group Aquæ* | | 50 |
| ,, *Cataplasmata* | | 94 |
| ,, *Confectiones* | | 115 |
| ,, *Decocta* | | 126 |
| ,, *Emplastra* | | 131 |
| ,, *Enemata* | | 131 |
| ,, *Extracta* | | 134 |
| ,, *Glycerina* | | 158 |
| ,, *Infusa* | | 182 |
| ,, *Linimenta* | | 196 |
| ,, *Liquores* | | 198 |
| ,, *Misturæ* | | 211 |
| ,, *Mucilagines* | | 217 |
| ,, *Olea* | | 221 |
| ,, *Opium, preparations of* | | 228 |
| ,, *Pilulæ* | | 236 |
| ,, *Pulveres* | | 259 |
| ,, *Soda preparations* | | 288 |
| ,, *Spiritus* | | 298 |
| ,, *Succi* | | 305 |
| ,, *Suppositoria* | | 308 |
| ,, *Syrupi* | | 310 |
| ,, *Tincturæ* | | 317 |
| ,, *Trochisci* | | 320 |
| ,, *Unguenta* | | 321 |
| ,, *Vapores* | | 324 |
| ,, *Vina* | | 326 |
| ,, *Zinc preparations* | | 327 |
| *Guaiacate of Lithia* | | 200 |
| Guaiaci *Haustus Comp.* | | 163 |
| ,, Lignum | | 161 |
| ,, Mistura | ½ to 2 oz. | 162 |
| ,, Resina | 10 to 30 grs. | 162 |
| ,, *Tinct.* | | 163 |
| ,, Tinct. Ammoniata | ½ to 1 drm. | 162 |
| *Guaiacum officinale* | | 161 |
| *Guarana* | | 163 |
| *Guaranæ Tinctura* | | 163 |
| Gum Acacia | | 1 |
| *Gummi Gutti* | | 82 |
| ,, *Resina Gutti* | | 82 |
| ,, *Rubri Decoctum* | | 163 |

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| GU to HE | Dose. | Page |
|---|---|---|
| *Gummi Rubri Extract. Liquid.* | | 163 |
| ,, ,, *Lotio* | | 163 |
| ,, ,, *Suppositoria* | | 164 |
| ,, ,, *Syrupus* | | 164 |
| ,, ,, *Tinctura* | | 164 |
| ,, ,, *Trochisci* | | 164 |
| ,, *Rubrum* | | 163 |
| Gun Cotton | | 260 |
| *Gurjun Balsam* | | 61 |
| Gutta Percha | | 164 |
| ,, ,, Liquor | | 164 |
| *Guttæ Daturinæ* | | 303 |
| ,, *Eserinæ* | | 236 |
| ,, *Pilocarpiæ* | | 187 |
| *Gynocardia Odorata* | | 164 |
| ,, *Oleum* | | 164 |
| *Gynocardic Acid* | | 165 |
| *Hachisch* | | 85 |
| Hæmatoxyli Decoctum | 1 to 2 oz. | 165 |
| ,, Extractum | 10 to 30 grs. | 165 |
| ,, Lignum | | 165 |
| ,, *Mistura* | | 165 |
| ,, ,, *Comp.* | | 165 |
| ,, ,, *Infantium* | | 166 |
| *Hæmatoxylon Campechianum* | | 165 |
| *Hæmostatic Collodion* | | 114 |
| *Hair Liniment* | | 88 |
| ,, *Solution for Blackening* | | 17 |
| ,, *Wash* | | 88 |
| *Hamamelis Virginica* | | 166 |
| *Tinctura* | | 166 |
| Hard Soap | | 276 |
| *Hartshorn, Spirit of* | | 39 |
| ,, *and Oil* | | 39 |
| *Haustus Ammoniac. Fœtid.* | | 41 |
| ,, *Ammonii Chloridi* | | 36 |
| ,, *Cinchonæ Comp.* | | 108 |
| ,, *Cupri Sulph.* | | 125 |
| ,, *Emeticus* | | 125 |
| ,, *Ferri et Ammoniæ* | | 140 |
| ,, *Guaiac. comp.* | | 163 |
| ,, *Ipecac. comp.* | | 187 |
| ,, ,, *et Ammon.* | | 187 |
| *Hebra's Ointment* | | 244 |
| *Hectograph* | | 180 |
| Hellebore, Green | | 325 |
| ,, ,, Tincture | | 325 |
| *Hellebori Nigri Extractum* | | 166 |
| ,, ,, *Tinctura* | | 166 |
| *Helleborus Niger* | | 166 |

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| HE to HY | Dose. | Page |
|---|---|---|
| Hemidesmi Radix | | 166 |
| ,, Syrupus | 1 to 4 drms. | 166 |
| *Hemidesmus Indicus* | | 166 |
| *Hemlock* | | 115 |
| Hemp, Indian | | 85 |
| *Henbane* | | 178 |
| *Hepar Sulphuris* | | 251 |
| Hips | | 269 |
| Hirudo | | 166 |
| *Hive Bee* | | 208 |
| *Hoffman's Anodyne Spirit* | | 28 |
| *Homberg's Sedative Salt* | | 7 |
| Honey | | 208 |
| ,, Clarified | | 208 |
| Hop | | 201 |
| Hordei Decoctum | | 167 |
| Hordeum decorticatum | | 167 |
| ,, *distichon* | | 167 |
| Horse-Radish Root | | 56 |
| *Houblon* | | 201 |
| *Huile de Cade* | | 189 |
| ,, *de Foie de Morue* | | 216 |
| ,, *Volatile de Carvi* | | 92 |
| ,, ,, *de Citron* | | 194 |
| ,, ,, *de Romarin* | | 271 |
| *Humulus Lupulus* | | 201 |
| *Huxham's Original Formula for Tincture of Bark* | | 108 |
| *Hydrargyri Amidato-bichloratum* | | 177 |
| Hydrargyri Ammoniati Unguentum | | 177 |
| ,, *Ammonio-chloridum. See* Hydrargyrum Ammoniatum | | 177 |
| ,, *Bichloridum* (now Hydr. Perchloridum) | | 174 |
| ,, *Bichloratum corrosivum* | | 174 |
| ,, ,, *Ammoniatum* | | 177 |
| ,, *Bibromidum Pessus* | | 169 |
| ,, *Bromidum Pessus* | | 169 |
| ,, *Chloridum*, former name for Calomel, now Subchloridum | | 175 |
| ,, ,, *Corrosivum* | | 174 |
| ,, ,, *Mite* | | 176 |
| ,, *Collyrium* | | 175 |
| ,, Emplastrum | | 168 |
| ,, ,, c. Ammoniaco | | 168 |
| ,, *Gargarisma* | | 175 |
| ,, Iodidi Rubri Unguentum | | 170 |
| ,, ,, ,, *Mistura* | | 170 |
| ,, ,, ,, *Solutio* | | 171 |
| ,, Iodidum Rubrum | $\frac{1}{16}$ to $\frac{1}{4}$ gr. | 169 |
| ,, ,, Viride | 1 to 3 grs. | 170 |
| ,, ,, ,, *Pilula* | | 171 |
| ,, ,, ,, Unguentum | | 171 |

| HY | Dose. | Page |
|---|---|---|
| Hydrargyri Linimentum | | 168 |
| „ Lotio Flava | | 175 |
| „ „ Nigra | | 176 |
| „ Nitratis Liquor Acidus | | 171 |
| „ „ Unguentum | | 171 |
| „ „ *Vaselin* | | 172 |
| „ *Nitrico-oxidum.* *See* Hydr. Oxid. Rub. | | 173 |
| „ *Oleas* | | 172 |
| „ „ *et Morphiæ* | | 172 |
| „ Oxidi Rubri Unguentum | | 174 |
| „ „ *Flavi Unguentum* | | 173 |
| „ Oxidum Flavum | | 173 |
| „ „ „ *viâ humidâ paratum* | | 173 |
| „ „ Rubrum | ¼ to 1 gr. | 173 |
| „ *Oxydulati Nitrici Liquor* | | 171 |
| „ Perchloridi *Collyrium* | | 175 |
| „ „ *Gargarisma* | | 175 |
| „ „ Liquor | 30 to 120 minims | 174 |
| „ „ „ *for subcutaneous injection* | | 175 |
| „ „ Lotio flava | | 175 |
| „ „ *Unguentum* | | 175 |
| „ Perchloridum | | 174 |
| „ Pilula | 3 to 8 grs. | 168 |
| „ *præcipitati albi Ung.* | | 177 |
| „ Subchloridi Lotio nigra | | 176 |
| „ „ Pilula composita | 5 to 10 grs | 176 |
| „ „ „ *c. Coloc.* | | 176 |
| „ „ „ *c. Jalapâ* | | 177 |
| „ „ „ *c. Scammoniâ* | | 177 |
| „ „ Unguentum | | 176 |
| „ Subchloridum | ⅓ to 1 gr. alterative, 2 to 8 grs. purgative | 175 |
| „ Sulphas | | 177 |
| „ Suppositoria | | 169 |
| „ Unguentum | | 169 |
| „ „ comp. | | 169 |
| „ „ *cinerei* | | 169 |
| „ „ *c. Ammoniæ Muriate* | | 169 |
| Hydrargyrum | | 167 |
| „ Ammoniatum | | 177 |
| „ *Biiodatum rubrum* | | 170 |
| „ *Biioduretum* | | 170 |
| „ *Chloratum Mite* | | 176 |
| „ *Chloretum Corrosivum* | | 174 |
| „ *Corrosivum Sublimatum.* *See* Hydr. Perchloridum | | 174 |
| „ c. Cretâ | 3 to 8 grs. | 177 |
| „ *Dulce* | | 176 |
| „ *Iodatum Flavum* | | 171 |
| „ „ *Viride* | | 171 |
| „ *Oxydatum rubrum* | | 173 |

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|---|---|---|
| *Hydrargyrum Præcipitatum Album* | | 177 |
| *Hydrastin* | | 347 |
| Hydrate of Chloral | | 100 |
| ,, *of Benzoyl* | | 6 |
| ,, *of Phenyl* | | 7 |
| ,, *of Potash* | | 249 |
| ,, *of Soda* | | 289 |
| Hydrated Peroxide of Iron | | 146 |
| *Hydrato-carbonas Ferrosus Saccharatus* | | 139 |
| *Hydrochlorate of Ammonia* | | 36 |
| ,, Morphia | | 213 |
| Hydrochloric Acid | | 12 |
| Hydrocyanic Acid Diluted | | 13 |
| *Hydrometers compared* | | xxvi, xxvii |
| *Hyoscyami Chloroformum* | | 179 |
| ,, Extractum | 3 to 6 grs. | 178 |
| ,, ,, *Fluidum* | | 179 |
| ,, Folia | | 178 |
| ,, *Linimentum* | | 179 |
| ,, ,, *Comp.* | | 179 |
| ,, Succus | ½ to 1 drm. | 179 |
| ,, Tinctura | 15 to 60 minims. | 179 |
| ,, ,, *Radicis* | | 179 |
| ,, ,, *Recentis* | | 179 |
| *Hyoscyamine* | | 180 |
| *Hyoscyamus niger* | | 178 |
| *Hypochlorite de Chaux* | | 77 |
| ,, *Soude Liquide* | | 294 |
| Hypophosphite of Lime | 5 to 10 grs. | 79 |
| ,, Soda | 5 to 10 grs. | 295 |
| *Hyposulphite of Soda* | | 297 |
| Iceland Moss | | 99 |
| ,, ,, *Jelly* | | 99 |
| *Ichthyocolla* | | 180 |
| *Ignatia Amara* | | 182, 221 |
| ,, ,, *Extractum* | | 181, 221 |
| *Illicium Anisatum* | | 45 |
| *Incompatibles :* Acaciæ Mucilago | | 1 |
| ,, Acetum | | 2 |
| ,, Acidum Arseniosum | | 5 |
| ,, ,, Citricum | | 11 |
| ,, ,, Gallicum | | 12 |
| ,, ,, Hydrochloricum | | 12 |
| ,, ,, Hydrocyanicum | | 14 |
| ,, ,, Nitricum | | 15 |
| ,, ,, Phosphoricum | | 17 |
| ,, ,, Sulphuricum | | 18 |
| ,, ,, Tannicum | | 21 |
| ,, ,, Tartaricum | | 22 |
| ,, Ammoniæ Acetatis Liquor | | 38 |

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*Incompatibles:* Ammoniæ Benzoas . . . . . . . . . . . . . . 38
,, ,, Carbonas . . . . . . . . . . . . . 39
,, ,, Fœtidus Spiritus . . . . . . . . . . 41
,, Ammonii Bromidum . . . . . . . . . . . . . 35
,, ,, Chloridum . . . . . . . . . . . . . 36
,, Antimonium Tartaratum . . . . . . . . . . . 50
,, Aqua Laurocerasi. Same as Hydrocyanic Acid . . . . 14
,, Argenti Nitras . . . . . . . . . . . . . . 54
,, Arsenic . . . . . . . . . . . . . . . . . 5
,, Beberiæ Sulphas . . . . . . . . . . . . . . 63
,, Belladonna . . . . . . . . . . . . . . . . 64
,, Bismuthi et Ammoniæ Citratis Liquor . . . . . . . 69
,, Borax . . . . . . . . . . . . . . . . . 71
,, Calcis Hydras . . . . . . . . . . . . . . . 78
,, Cannabis Indicæ Tinctura . . . . . . . . . . . 86
,, Caryophyllum . . . . . . . . . . . . . . . 92
,, Cascarilla . . . . . . . . . . . . . . . . 93
,, Catechu Pallidum . . . . . . . . . . . . . 95
,, Chlori Liquor . . . . . . . . . . . . . . . 102
,, Cinchona Flava . . . . . . . . . . . . . . 107
,, ,, Rubra . . . . . . . . . . . . . . 109
,, Colchicum . . . . . . . . . . . . . . . . 111
,, Conii Folia . . . . . . . . . . . . . . . . 116
,, Creta Præparata . . . . . . . . . . . . . . 121
,, Cupri Sulphas . . . . . . . . . . . . . . 125
,, Cusparia . . . . . . . . . . . . . . . . 126
,, Digitalis . . . . . . . . . . . . . . . . 127
,, Ergota . . . . . . . . . . . . . . . . . 132
,, Ferri Carbonas Saccharata . . . . . . . . . . 139
,, ,, et Ammoniæ Citras . . . . . . . . . . 140
,, ,, et Quiniæ Citras . . . . . . . . . . . 141
,, ,, Iodidum . . . . . . . . . . . . . . 142
,, ,, Perchloridi Tinct. . . . . . . . . . . . 143
,, Ferrum Tartaratum . . . . . . . . . . . . . 151
,, Galla . . . . . . . . . . . . . . . . . 154
,, Gentianæ Radix . . . . . . . . . . . . . . 156
,, Granati Radicis Cortex . . . . . . . . . . . 161
,, Guaiaci Resina . . . . . . . . . . . . . . 162
,, Hæmatoxyli Lignum . . . . . . . . . . . . 165
,, Hydrargyri Nitratis Unguentum . . . . . . . . 172
,, ,, Perchloridum . . . . . . . . . 174
,, ,, Subchloridum . . . . . . . . . 176
,, Hydrargyrum cum Cretâ . . . . . . . . . . . 178
,, Hyoscyamus . . . . . . . . . . . . . . . 178
,, Iodi Tinctura . . . . . . . . . . . . . . . 183
,, Ipecacuanha . . . . . . . . . . . . . . . 185
,, Kino . . . . . . . . . . . . . . . . . . 190
,, Krameria . . . . . . . . . . . . . . . . 191
,, Laurocerasi Aqua, same as Acid. Hydrocyan. . . . . 14
,, Limon . . . . . . . . . . . . . . . . . 194

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|---|---|---|
| *Incompatibles:* Lini Infusum | | 197 |
| ,, Lupulus | | 201 |
| ,, Magnesia | | 203 |
| ,, Magnesiæ Sulphas | | 205 |
| ,, Morphiæ Hydrochloras | | 214 |
| ,, Mucilago Acaciæ | | 1 |
| ,, Opium | | 225 |
| ,, Pareiræ Radix | | 232 |
| ,, Plumbi Acetas | | 241 |
| ,, ,, Sabacetatis Liquor | | 244 |
| ,, Potassæ Liquor | | 250 |
| ,, ,, Permanganatis Liquor | | 256 |
| ,, Potassii Bromidum | | 247 |
| ,, ,, Iodidum | | 248 |
| ,, Quercus Decoctum | | 261 |
| ,, Quiniæ Sulphas | | 262 |
| ,, Sarsæ | | 278 |
| ,, Spiritus Ætheris Nitrosi | | 300 |
| ,, Stramonium | | 303 |
| ,, Ulmi Decoctum | | 321 |
| ,, Unguentum Hydrargyri Nitratis | | 171 |
| ,, Uvæ Ursi Infusum | | 323 |
| ,, Zinci Valerianas | | 332 |
| ,, Zinc Salts | | 327 |
| Indian Hemp | | 85 |
| Infusa (*group*) | | 182 |
| *Infusion Pot* | | 181 |
| Infusum Anthemidis | 1 to 3 oz. | 46 |
| ,, *Angusturæ* | | 126 |
| ,, *Armoraciæ compositum* | | 56 |
| ,, Aurantii | 1 to 2 oz. | 60 |
| ,, ,, compositum | 1 to 2 oz. | 60 |
| ,, Buchu | 1 to 4 oz. | 73 |
| ,, Calumbæ | 1 to 2 oz. | 81 |
| ,, Caryophylli | 1 to 2 oz. | 92 |
| ,, Cascarillæ | 1 to 2 oz. | 93 |
| ,, Catechu | 1 to 2 oz. | 95 |
| ,, ,, *Compositum* | | 95 |
| ,, *Chinæ frigide paratum* | | 109 |
| ,, Chiratæ | 1 to 2 oz. | 100 |
| ,, Cinchonæ | 1 to 2 oz. | 107 |
| ,, Cuspariæ | 1 to 2 oz. | 126 |
| ,, Cusso | 4 oz. | 126 |
| ,, Digitalis | ¼ to ½ oz. | 128 |
| ,, *Diosmæ. See* Buchu | | 73 |
| ,, Dulcamaræ | 1 to 2 oz. | 129 |
| ,, Ergotæ | 1 to 2 oz. | 133 |
| ,, Gentianæ compositum | 1 to 2 oz. | 156 |
| ,, Krameriæ | 1 to 2 oz. | 191 |
| ,, *Laxativum* | | 284 |
| ,, Lini | | 197 |

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|---|---|---|
| Infusum Lupuli | 1 to 2 oz. | 201 |
| ,, Maticæ | 1 to 4 oz. | 208 |
| ,, Quassiæ | 1 to 2 oz. | 261 |
| ,, *Rhataniæ. See* Infus. Krameriæ | | 191 |
| ,, Rhei | 1 to 2 oz. | 266 |
| ,, Rosæ Acidum | 1 to 2 oz. | 270 |
| ,, ,, *cum Acido Nitrico* | | 271 |
| ,, Senegæ | 1 to 2 oz. | 283 |
| ,, Sennæ | 1 to 2 oz. | 284 |
| ,, Serpentariæ | 1 to 2 oz. | 285 |
| ,, *Simarubæ* | | 286 |
| ,, *Sinapis* | | 287 |
| ,, *Table of* | | 182 |
| ,, Uvæ Ursi | 1 to 2 oz. | 322 |
| ,, Valerianæ | 1 to 2 oz. | 323 |
| ,, *Vincæ Majoris* | | 327 |
| *Inhalatio. See* Vapores | | 324 |
| ,, *Acidi Carbolici* | | 8 |
| ,, Acidi Hydrocyanici | | 14 |
| ,, Chlori | | 76 |
| ,, *Chloroformi* | | 104 |
| ,, Coniæ | | 116 |
| ,, Creasoti | | 120 |
| ,, Iodi | | 184 |
| ,, *Iodi cum Conio* | | 184 |
| Injectio *Acidi Carbolici* | | 8 |
| ,, *Cupri* | | 124 |
| ,, Morphiæ Hypodermica | | 213 |
| *Insect Powder* | | 260 |
| ,, *Poison bottle* | | 247 |
| *Iodetum Hydrargyricum Rubrum* | | 170 |
| Iodi *Gargarisma* | | 184 |
| ,, *Glycerinum* | | 184 |
| ,, *Inhalatio c. Conio* | | 184 |
| ,, Linimentum | | 183 |
| ,, Liquor | | 184 |
| ,, *Lotio comp.* | | 184 |
| ,, *Mistura Composita* | | 184 |
| ,, *Solutio Spirit.* | | 184 |
| ,, Tinctura | 5 to 20 minims | 184 |
| ,, ,, *Decolorata* | | 184 |
| ,, Unguentum | | 184 |
| ,, ,, *comp.* | | 184 |
| ,, Vapor | | 184 |
| Iodide *of Ammonium* | | 36 |
| ,, *Arsenic* | | 6 |
| ,, Cadmium | | 74 |
| ,, Iron | | 141 |
| ,, Lead | | 242 |
| ,, Potassium | 2 to 10 grs. | 248 |

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| IO to JU | Dose. | Page |
|---|---|---|
| Iodide of Sulphur | | 307 |
| Iodine | | 183 |
| *Iodoform* | | 185 |
| Iodum | ½ gr. | 183 |
| *Iodure de Fer* | | 141 |
| ,, *Plomb* | | 242 |
| ,, *Potassium* | | 248 |
| Ipecacuanha . Expectorant, ½ to 2 grs. | Emetic, 15 to 30 grs. | 185 |
| Ipecacuanhæ *Haustus comp.* | | 187 |
| ,, ,, *et Ammoniæ* | | 187 |
| ,, Pil. c. Scillâ | 5 to 10 grs. | 186 |
| ,, Pulvis compositus | 5 to 10 grs. | 186 |
| ,, ,, *Opiatus* | | 186 |
| ,, ,, *c. Opio* | | 186 |
| ,, ,, *Thebaicus* | | 186 |
| ,, *Syrupus* | | 186 |
| ,, *Tinctura* | | 187 |
| ,, Trochisci (¼ gr. in each) | 1 to 3 loz. | 186 |
| ,, ,, et Morphiæ | 1 to 6 loz. | 186 |
| ,, Vinum | 5 to 40 minims | 186 |
| *Iridin* | | 347 |
| *Irish Moss* | | 99 |
| *Iron* | | 137 |
| ,, *Alum* | | 34 |
| ,, *Dialysed* | | 145 |
| ,, *Ferroso-ferric Oxide of* | | 143 |
| ,, *Malate of, Wine* | | 151 |
| ,, Reduced | | 150 |
| ,, *Sugar* | | 147 |
| *Isinglass* | | 180 |
| *Isonandra Gutta* | | 164 |
| *Jaborandi* | | 187 |
| ,, *Tinctura* | | 187 |
| Jalapa | 10 to 30 grs. | 187 |
| Jalapæ Extractum | 5 to 15 grs. | 187 |
| ,, *Mistura comp.* | | 188 |
| ,, *Pilula c. Calomel* | | 188 |
| ,, Pulvis comp. | 20 to 60 grs. | 188 |
| ,, Resina | 2 to 5 grs. | 188 |
| ,, *Sapo* | | 188 |
| ,, Tinctura | ½ to 2 drms. | 188 |
| *Jalapine. See* Jalapæ Resina | | 188 |
| *James's Fever Powder* | | 47 |
| *Jateorrhiza Calumba* | | 80 |
| *Jeremie's Laudanum* | | 229 |
| Jordan Almonds | | 43 |
| *Juglandin* | | 347 |
| *Juices (group)* | | 305 |
| Juniperi Oleum | 1 to 3 minims | 188 |
| ,, ,, *Empyreumat.* | | 189 |

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|---|---|---|
| Juniperi Spiritus | 30 to 60 minims | 189 |
| *Juniper Tar* | | 189 |
| ,, ,, *Soap* | | 278 |
| *Juniperus communis* | | 188 |
| ,, *Oxycedrus* | | 189 |
| ,, *Sabina* | | 272 |
| *Jusquiame* | | 178 |
| *Kali. See* Potassa | | 249 |
| *Kalium Bicarbonicum Purum* | | 252 |
| ,, *Bitartaricum Purum* | | 247 |
| ,, *Bromatum* | | 247 |
| ,, *Causticum Fusum* | | 249 |
| ,, *Chloricum* | | 254 |
| ,, *Hypermanganicum* | | 256 |
| ,, *Iodatum* | | 248 |
| ,, *Natro-Tartaricum* | | 290 |
| ,, *Stibiato-Tartaricum* | | 50 |
| ,, *Sulphuratum* | | 251 |
| ,, *Sulphuricum* | | 257 |
| ,, *Tartaricum Neutrum* | | 257 |
| Kamala | 30 to 120 grs. | 189 |
| *Kamalæ Tinctura* | | 189 |
| *Kaolin* | | 33 |
| *Kinate of Cinchonia* | | 105 |
| ,, *Quinia* | | 105 |
| Kino | 10 to 30 grs. | 189 |
| ,, Pulv. comp. | 5 grs. | 190 |
| ,, Tinctura | ½ to 2 drms. | 190 |
| *Kokum Butter* | | 155 |
| ,, ,, *Tree* | | 155 |
| *Koosso* | | 126 |
| *Kosso* | | 126 |
| Kousso | | 126 |
| *Krameria triandra* | | 190 |
| Krameriæ Extractum | 5 to 20 grs. | 191 |
| ,, Infusum | 1 to 2 oz. | 191 |
| ,, Radix | Pulv. 20 to 60 grs. | 190 |
| ,, *Suppositoria* | | 191 |
| ,, Tinctura | 1 to 2 drms. | 191 |
| ,, *Trochisci* | | 191 |
| *Kreasote* | | 118 |
| Lac | | 191 |
| ,, *Sulphuris* | | 306 |
| *Lactic Acid* | | 14 |
| Lactuca | | 192 |
| ,, *Virosa* | | 192 |
| Lactucæ Extractum | 5 to 10 grs. | 192 |
| ,, *Succus* | | 192 |
| *Lactucarii Tinctura* | | 192 |
| *Lactucarium* | | 192 |

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|---|---|---|
| *Lairitz's Fir Wool Oil* | | 240 |
| *Laitue, Eau de* | | 192 |
| *Lapis Calaminaris* | | 329 |
| ,, *Divinus* | | 125 |
| ,, *Tutiæ* | | 331 |
| *Larch Bark* | | 192 |
| Lard, Benzoated | | 26 |
| ,, *Odorated* | | 26 |
| ,, *Oxygenated* | | 26 |
| ,, Prepared | | 25 |
| Laricis Cortex | | 192 |
| ,, Tinctura | 20 to 25 minims | 192 |
| *Larix Europæa* | | 192 |
| *Laudanum. See* Tinct. Opii | | 227 |
| ,, *Jeremie's* | | 229 |
| ,, *Sydenham's* | | 229 |
| Laurocerasi Aqua | 5 to 30 minims | 193 |
| ,, Folia | | 193 |
| *Lavandula Vera* | | 193 |
| Lavandulæ Oleum | 1 to 4 minims | 193 |
| ,, Spiritus | 30 to 60 minims | 193 |
| ,, ,, *compositus* | | 194 |
| ,, Tinctura comp. | ½ to 2 drms. | 194 |
| ,, ,, *Rubr.* | | 194 |
| *Lead* | | 240 |
| ,, *Sugar of* | | 240 |
| Leech | | 166 |
| Lemon Juice | | 195 |
| ,, ,, *Substitute for* | | 11 |
| *Lenitive Electuary* | | 284 |
| *Leopard's Bane* | | 56 |
| *Leptandrin* | | 347 |
| Lettuce | | 192 |
| Lignum *Campechianum* | | 165 |
| ,, Guaiaci | | 161 |
| ,, *Santalis Rubr.* | | 259 |
| Lime | | 76 |
| ,, *Carbolate of* | | 9 |
| ,, Carbonate of, Precipitated | | 78 |
| ,, Chlorinated | | 76 |
| ,, Hypophosphite of | | 79 |
| ,, *Muriate of, in crystals* | | 76 |
| ,, Phosphate of | | 80 |
| ,, Slaked | | 78 |
| ,, Water | | 79 |
| Limon | | 194 |
| *Limonade Purgative* | | 205 |
| Limonis Cortex | | 194 |
| ,, Oleum | 1 to 4 minims | 194 |
| ,, Succus | ½ to 4 oz. | 195 |

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|---|---|---|
| Limonis Syrupus | 1 to 2 drms. | 195 |
| „ Tinctura | ½ to 2 drms. | 195 |
| Lini Cataplasma | | 196 |
| „ Farina | | 196 |
| „ Infusum | | 197 |
| „ Oleum | | 197 |
| „ Semina | | 197 |
| *Liniment for Freckles* | | 79 |
| *Linimenta (group)* | | 196 |
| Linimentum Aconiti | | 22 |
| „ Ammoniæ | | 41 |
| „ Belladonnæ | | 66 |
| „ „ *comp.* | | 66 |
| „ *Calcaire* | | 78 |
| „ Calcis | | 78 |
| „ Camphoræ | | 83 |
| „ „ compositum | | 83 |
| „ *Cantharidis*, now called Liquor Epispasticus | | 87 |
| „ *Capsici* | | 89 |
| „ Chloroformi | | 104 |
| „ *Conii* | | 117 |
| „ *Crinale* | | 88 |
| „ Crotonis | | 123 |
| „ Hydrargyri | | 168 |
| „ *Hyoscyami* | | 179 |
| „ „ *Comp.* | | 179 |
| „ Iodi | | 183 |
| „ Opii | | 226 |
| „ Potassii Iodidi. c. Sapone | | 248 |
| „ *Saponatum Camph. Liquid.* | | 277 |
| „ Saponis | | 277 |
| „ *Savonneux* | | 277 |
| „ Sinapis compositum | | 287 |
| „ Terebinthinæ | | 314 |
| „ „ Aceticum | | 315 |
| Linseed Meal | | 196 |
| *Linum* | | 196 |
| „ *usitatissimum* | | 196 |
| *Liqueur de Van Swieten* | | 175 |
| *Liquidambar orientale* | | 305 |
| *Liquiritia* | | 159 |
| *Liquiritiæ Pulvis Compositus* | | 160 |
| *Liquores (group)* | | 198 |
| Liquor Ammoniæ | 10 to 20 minims | 40 |
| „ „ Acetatis | 2 to 6 drms. | 37 |
| „ „ „ *Conc.* | | 38 |
| „ „ *Arsenitis* | | 6 |
| „ „ Citratis | 2 to 6 drms. | 40 |
| „ „ fortior | | 40 |
| „ *Ammoniæ Iodidi* | | 184 |

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| LI | Dose. | Page |
|---|---|---|
| Liquor *Ammonii Caustici* | | 40 |
| ,, Antimonii Chloridi | | 48 |
| ,, Arsenicalis | 2 to 8 minims | 5 |
| ,, *Arsenici Chloridi* | | 6 |
| ,, Arsenici Hydrochloricus | 2 to 8 minims | 5 |
| ,, ,, *et Hydrargyri Hydriodatis* | | 6 |
| ,, Atropiæ | 1 minim | 59 |
| ,, ,, Sulphatis | 1 minim | 59 |
| ,, Bismuthi Ammonio-citratis | ½ to 1 drm. | 69 |
| ,, *Calcii Chloridi* | | 76 |
| ,, Calcis | ½ to 2 oz. | 79 |
| ,, ,, Chloratæ | 20 to 40 minims | 77 |
| ,, ,, saccharatus | 15 to 60 minims | 79 |
| ,, *Carbonis detergens* | | 120 |
| ,, Chlori | 10 to 20 minims | 102 |
| ,, *Chloroformi Camphoratus* | | 104 |
| ,, ,, *compositus* | | 104 |
| ,, *Donovani* | | 5 |
| ,, Epispasticus, Blistering Liquid | | 87 |
| ,, *Ferri Acetici* | | 137 |
| ,, ,, *Bromidi* | | 138 |
| ,, ,, *Chloroxydi* | | 145 |
| ,, ,, *Dialysatus* | | 145 |
| ,, ,, *Iodidi* | | 142 |
| ,, ,, *Nitratis* | | 145 |
| ,, ,, Perchloridi | 10 to 30 minims | 144 |
| ,, ,, ,, fortior | | 143 |
| ,, ,, Pernitratis | | 145 |
| ,, ,, Persulphatis | | 149 |
| ,, ,, *Sesquichlorati. See* Perchloridi | | 144 |
| ,, *Fowleri* | | 5 |
| ,, Gutta Percha | | 164 |
| ,, *Hydrargyri Iodidi Rubri* | | 170 |
| ,, ,, Nitratis Acidus | | 171 |
| ,, ,, *Oxydulati Nitrici* | | 171 |
| ,, ,, Perchloridi | 30 to 120 minims | 174 |
| ,, ,, ,, *for subcutaneous injection* | | 175 |
| ,, Iodi | | 184 |
| ,, *Kali Caustici* | | 250 |
| ,, ,, *Citrici* | | 255 |
| ,, Lithiæ Effervescens | 5 to 10 oz. | 199 |
| ,, Magnesiæ Carbonatis | 1 to 2 oz. | 204 |
| ,, ,, Citratis | 5 to 10 oz. | 205 |
| ,, ,, *Sulphatis* | | 206 |
| ,, Morphiæ Acetatis | 10 to 60 minims | 213 |
| ,, ,, ,, *for hypodermic injection* | | 212 |
| ,, ,, *c. Atropiâ, for hypodermic injection* | | 213 |
| ,, ,, *Bimeconatis* | | 228 |
| ,, ,, Hydrochloratis | 10 to 60 minims | 214 |
| ,, *Natri Caustici* | | 289 |

| LI to LO | Dose. | Page. |
|---|---|---|
| Liquor *Natri Chlorati* | | 294 |
| ,, *Opii Sedativus* | | 228 |
| ,, *Plumbi Diacetatis*<br>,, ,, Subacetatis | | 244 |
| ,, ,, ,, dilutus | | 244 |
| ,, Potassæ | 15 to 60 minims | 249 |
| ,, ,, *Arsenitis. See* Liquor Arsenicalis | | 5 |
| ,, ,, Effervescens | 5 to 10 oz. | 253 |
| ,, ,, Permanganatis | ¼ to ½ oz. | 256 |
| ,, *Sedativus (Battley)* | | 228 |
| ,, Sodæ | ½ to 1 drm. | 289 |
| ,, ,, Arseniatis | 5 to 10 minims | 291 |
| ,, ,, Chloratæ | 10 to 20 minims | 293 |
| ,, ,, Effervescens | | 292 |
| ,, Strychniæ | 4 to 10 minims | 304 |
| ,, *Volatilis Cornu-cervi* | | 39 |
| ,, Zinci Chloridi | | 329 |
| Liquorice | | 159 |
| *Liston's Plaster* | | 180 |
| *Lithargyrum* | | 243 |
| *Lithargyri Cremor* | | 245 |
| *Lithia* | | 198 |
| Lithiæ Carbonas | 3 to 6 grs. | 199 |
| ,, Citras | 5 to 10 grs. | 199 |
| ,, *Guaiacas* | | 200 |
| ,, Liquor Effervescens | 5 to 10 oz. | 199 |
| *Lithium Carbonicum* | | 199 |
| Lobelia | | 200 |
| ,, *inflata* | | 200 |
| Lobeliæ Tinctura | 10 to 30 minims | 200 |
| ,, ,, Ætherea | 10 to 30 minims | 201 |
| Logwood | | 165 |
| Lotio *Acidi Boracici* | | 7 |
| ,, ,, *Carbolici* | | 9 |
| ,, *Ammonii Chloridi* | | 36 |
| ,, *Argenti Nitratis Ætherea* | | 55 |
| ,, ,, ,, *Fortis* | | 55 |
| ,, *Benzoini* | | 67 |
| ,, *Bismuthi* | | 70 |
| ,, *Boracis* | | 72 |
| ,, *Crinalis* | | 41 |
| ,, *Cupri* | | 124 |
| ,, *Ferri Sulphatis* | | 149 |
| ,, *Gummi Rubri* | | 163 |
| ,, Hydrargyri flava | | 175 |
| ,, ,, nigra | | 176 |
| ,, *Iodi Comp.* | | 184 |
| ,, *Plumbi Acetatis* | | 241 |
| ,, ,, *Diacetatis* | | 245 |
| ,, *Zinci Acetatis* | | 328 |
| *Lotion avec l'Acétate de Plomb* | | 244 |

| LO to MA | Dose. | Page |
|---|---|---|
| *Lozenges* (*group*). *See* Trochisci | | 320 |
| *Lugol's Caustic* | | 184 |
| ,, *Solution* | | 184 |
| *Lunar Caustic* | | 54 |
| Lupuli Extractum | 5 to 10 grs. | 201 |
| ,, *Glandulæ* | | 201 |
| ,, Infusum | 1 to 2 oz. | 201 |
| ,, Tinctura | ½ to 2 drms. | 201 |
| ,, ,, *Vinosa* | | 202 |
| *Lupulin* | | 202 |
| *Lupulinæ Extractum* | | 202 |
| ,, *Tinctura* | | 202 |
| Lupulus | | 201 |
| *Mace, Oil of* | | 218 |
| *Macidis Oleum Æthereum* | | 218 |
| *Magistery of Bismuth* | | 69 |
| Magnesia | Antacid, 10 to 20 grs. Purgative, 20 to 60 grs. | 203 |
| *Magnesia carbonica* | | 204 |
| ,, levis | Antacid, 10 to 20 grs. Purgative, 20 to 60 grs. | 203 |
| Magnesiæ Carbonas | Antacid, 10 to 20 grs. Purgative, 30 to 60 grs. | 204 |
| ,, ,, levis | Antacid, 10 to 20 grs. Purgative, 30 to 60 grs. | 204 |
| ,, Carbonatis Liquor | 1 to 2 oz. | 204 |
| ,, Citratis Liquor | 5 to 10 oz. | 205 |
| ,, *Mistura c. Rheo* | | 204 |
| ,, Sulphas | 1 to 4 drms. | 205 |
| ,, Sulphatis Enema | | 208 |
| ,, ,, *Liquor* | | 208 |
| ,, ,, *Mistura c. Rheo Infantium* | | 208 |
| ,, *Sulphis* | | 208 |
| *Magnesian Limestone* | | 202 |
| *Magnesium* | | 202 |
| Magnetic Oxide of Iron | | 143 |
| *Malate of Iron Wine* | | 151 |
| Male Fern | | 152 |
| ,, *Oil of* | | 152 |
| *Malt* | | 73 |
| ,, *Extract of* | | 73 |
| *Manganese, Sulphate of* | | 206 |
| Manganesii Oxidum Nigrum | | 206 |
| ,, ,, *præparatum* | 10 to 30 grs. | 206 |
| ,, *Sulphas* | | 206 |
| Manna | | 207 |
| Mannite | | 207 |
| Marble | | 207 |
| *Marigold* | | 80 |
| Marmor album | | 207 |
| Mastic | | 207 |
| Mastiche | 20 to 40 grs. | 207 |
| *Materia Medica table* | | xxviii—xxxvii |
| Maticæ Folia | 30 to 120 grs. | 208 |

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| MA to MI | Dose. | Page |
|---|---|---|
| Maticæ Infusum | 1 to 4 oz. | 208 |
| „ *Tinctura* | | 208 |
| Matico Leaves | | 208 |
| Measures, Metrical | | xxiv |
| „ and Weights of British Pharmacopœia | | xxi |
| *Meat, Extract of* | | 91 |
| *Meconic Acid* | | 224 |
| *Meconin* | | 224 |
| *Medicated Bougies* | | 346 |
| „ *pledgets of cotton* | | 346 |
| Mel | | 208 |
| „ Boracis | | 72 |
| „ depuratum | | 208 |
| *Melaleuca Minor* | | 75 |
| *Menispermin* | | 347 |
| *Mentha Piperita* | | 209 |
| „ *Viridis* | | 210 |
| Menthæ Piperitæ Aqua | 1 to 2 oz. | 209 |
| „ „ Essentia | 10 to 20 minims | 209 |
| „ „ Oleum | 1 to 4 minims | 209 |
| „ „ Spiritus | 30 to 60 minims | 209 |
| „ Viridis Aqua | 1 to 2 oz. | 210 |
| „ „ Oleum | 1 to 4 minims | 210 |
| *Menthol* | | 210 |
| Mercury | | 167 |
| *Methylene Bichloride* | | 104 |
| Mezerei Cortex | | 210 |
| „ Extractum Æthereum | | 210 |
| „ *Unguentum* | | 211 |
| *Mézéréon ou Bois Gentil* | | 210 |
| Mica Panis | | 211 |
| „ „ *Cataplasma* | | 211 |
| Milk | | 191 |
| *Mindererus Spirit. See* Liquor Ammon. Acetatis | | 37 |
| *Mineral Waters, British* | | 348 |
| „ „ *Classified* | | 386 |
| „ „ *Foreign* | | 350 |
| „ „ „ *Imported* | | 383 |
| *Misturæ (group)* | | 211 |
| Mistura *Acaciæ* | | 1 |
| „ „ *Levis et Spissa* | | 1 |
| „ *Alba* | | 204 |
| „ Ammoniaci | ½ to 1 oz. | 35 |
| „ „ *comp.* | | 35 |
| „ „ *Ipec. et Lobeliæ* | | 35 |
| „ Amygdalæ | 1 to 2 oz. | 43 |
| „ „ *amaræ* | | 42 |
| „ *Camphoræ. See* Aqua Camphoræ | | 83 |
| „ *Cetacei* | | 99 |
| „ *Chloroformi c. Ammon.* | | 104 |

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Mistura *Cinchonæ Comp.* . . . . . 108
„ „ *c. Acido Sulph.* . . . . . 108
„ *Colchici* . . . . . 112
„ „ *Alkalina* . . . . . 113
„ „ *Aperiens* . . . . . 113
„ *Conii c. Hyoscyam.* . . . . . 117
„ *Copaibæ* . . . . . 118
„ Creasoti . . . . . 1 to 2 oz. . . . . . 119
„ „ *c. Opio* . . . . . 120
„ Cretæ . . . . . 1 to 2 oz. . . . . . 121
„ „ *c. Opio* . . . . . 121
„ *Ergotæ comp.* . . . . . 133
„ Ferri Aromatica . . . . . 1 to 2 oz. . . . . . 143
„ „ composita . . . . . 1 to 2 oz. . . . . . 139
„ „ *et Quiniæ Effervescens* . . . . . 141
„ „ *Laxans* . . . . . 149
„ *Filicis* . . . . . 152
„ Gentianæ . . . . . ½ to 1 oz. . . . . . 156
„ „ *Alkalina* . . . . . 157
„ „ *et Sennæ* . . . . . 157
„ Guaiaci . . . . . ½ to 2 oz. . . . . . 162
„ *Hæmatoxyli* . . . . . 165
„ „ *Comp.* . . . . . 165
„ „ *Infantium* . . . . . 166
„ *Hydrargyri Iodidi* . . . . . 170
„ *Iodi Comp.* . . . . . 184
„ *Jalapæ Comp.* . . . . . 188
„ *Magnesiæ c. Rheo* . . . . . 204
„ „ *Sulphatis c. Rheo Infantium* . . . . . 206
„ *Moschi* . . . . . 217
„ Scammonii . . Infant, ½ to 1 oz. Adult, 1 to 2 oz. . . . . 281
„ Sennæ comp. . . . . . 1 to 1½ oz. . . . . . 284
„ *Sodæ Sulpho-carbolatis* . . . . . 10
„ „ „ „ *et Cinchonæ* . . . . . 10
„ Spiritus Vini Gallici . . . . . ½ to 1½ oz. . . . . . 301
*Mixtura Gummosa* . . . . . 2
*Mixture for Cholera* . . . . . 121
„ *Whooping Cough* . . . . . 111
Moist Peroxide of Iron . . . . . 145
*Monobromated Camphor* . . . . . 84
Mori Succus . . . . . 212
„ Syrupus . . . . . 1 to 2 drms. . . . . . 212
*Morphia* . . . . . 223
„ *Oleate of* . . . . . 215
Morphiæ Acetas . . . . . ⅛ to ½ gr. . . . . . 212
„ Acetatis Liquor . . . . . 10 to 60 minims . . . . 213
„ „ „ *Hypodermica* . . . . . 213
„ *Bimeconatis Solutio* . . . . . 228
„ Hydrochloras . . . . . ⅛ to ½ gr. . . . . . 213
„ Hydrochloratis Liquor . . . 10 to 60 minims . . . . 214

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| MO to MY | Dose. | Page |
|---|---|---|
| Morphiæ Hydrochloratis Suppositoria | | 214 |
| ,, Injectio Hypodermica | 1 to 6 minims | 212 |
| ,, *Oleas* | | 215 |
| ,, *Sulphas* | | 215 |
| ,, Suppositoria | | 214 |
| ,, ,, c. Sapone | | 215 |
| ,, *Syrupus* | | 229 |
| ,, *Tartras* | | 215 |
| ,, Trochisci | 1 or 2 loz. | 215 |
| ,, ,, et Ipecac. | 1 or 2 loz. | 215 |
| Morrhuæ Oleum | 1 to 4 drms. | 215 |
| *Morus Nigra* | | 212 |
| *Moschi Mistura* | | 217 |
| ,, *Tinctura* | | 217 |
| Moschus | 5 to 10 grs. | 216 |
| ,, *Moschiferus* | | 216 |
| *Mountain Damson* | | 286 |
| *Mucilage de Gomme Adragante* | | 319 |
| *Mucilagines (group)* | | 217 |
| Mucilago Acaciæ | | 1 |
| ,, ,, *spissa et levis* | | 1 |
| ,, Amyli | | 44 |
| ,, *Salep* | | 274 |
| ,, Tragacanthæ | | 319 |
| *Mucuna* | | 217 |
| ,, *Pruriens* | | 217 |
| *Mudar* | | 217 |
| Mulberry Juice | | 212 |
| *Muriate of Ammonia* | | 36 |
| ,, *Lime, in crystals* | | 76 |
| ,, *Morphia* | | 213 |
| *Muriatic Acid* | | 12 |
| *Mûrier Noir* | | 212 |
| *Musc* | | 216 |
| *Muscadier cultivé* | | 218 |
| Musk | | 216 |
| ,, *Root* | | 308 |
| Mustard | | 286 |
| ,, Paper | | 287 |
| *Mynsicht's Elixir of Vitriol* | | 19 |
| Myristica | 5 to 15 grs. | 217 |
| ,, *officinalis* | | 217 |
| Myristicæ Oleum | 2 to 6 minims | 218 |
| ,, ,, Expressum | | 218 |
| ,, Spiritus | 30 to 60 minims | 218 |
| *Myrospermum* | | 62 |
| *Myroxylon Pareiræ* | | 62 |
| ,, *Toluifera* | | 62 |
| Myrrha | 10 to 30 grs. | 218 |
| Myrrhæ *Gargarisma* | | 219 |

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| MY to OI | Dose. | Page |
|---|---|---|
| Myrrhæ Tinctura | ½ to 1 drm. | 219 |
| ,, ,, *et Boracis. See* Borax | | 72 |
| *Narcein* | | 224 |
| *Narcotina* | | 223 |
| *Narthex Assafœtida* | | 57 |
| *Natro-Kali Tartaricum* | | 290 |
| *Natrum Bicarbonicum* | | 292 |
| ,, *Causticum Solutum* | | 289 |
| ,, *Hypochlorosum Solutum* | | 294 |
| ,, *Hypophosphorosum* | | 295 |
| ,, *Phosphoricum* | | 296 |
| ,, *Sulphuricum* | | 296 |
| *Nectandra Rodiæi* | | 63, 219 |
| Nectandræ Cortex | | 219 |
| *Nepenthe* | | 229 |
| *Nickel, Sulphate of* | | 219 |
| *Nicotiana Tabacum* | | 311 |
| *Nicotin* | | 311 |
| *Nightshade, Deadly* | | 64 |
| *Nitrate Acide de Deutoxide de Mercure* | | 171 |
| ,, of Ammonia | | 41 |
| ,, *of Bismuth* | | 69 |
| ,, of Lead | | 243 |
| ,, of Potash | | 255 |
| ,, of Silver | | 55 |
| ,, ,, ,, *Caustic Points* | | 55 |
| ,, ,, ,, *Black Stains, to remove* | | 54 |
| ,, of Soda | | 295 |
| *Nitre* | | 255 |
| Nitric Acid | | 14 |
| ,, ,, Diluted | | 15 |
| Nitrate of Amyl | | 43 |
| *Nitro-Glycerine* | | 220 |
| Nitro-Hydrochloric Acid, diluted | | 15 |
| ,, ,, *Bath* | | 16 |
| *Nitrous Oxide Gas* | | 41 |
| *Noix Vomique* | | 220 |
| Nucis Vomicæ Extractum | ⅓ to 1 gr. | 220 |
| ,, ,, Tinctura | 10 to 30 minims | 220 |
| Nutmeg | | 217 |
| Nux *Moschata* | | 218 |
| ,, Vomica | 1 to 3 grs. | 220 |
| Oak Bark | | 261 |
| Oil of Anise | | 45 |
| ,, Cajuput | | 75 |
| ,, *Canada Fleabane* | | 133 |
| ,, Dill | | 45 |
| ,, Juniper | | 188 |
| ,, Lavender | | 193 |
| ,, *Mace* | | 218 |

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|---|---|---|
| Oil of *Male Fern* | | 152 |
| ,, Rosemary | | 271 |
| ,, Rue | | 271 |
| ,, *Scotch Pine leaf* | | 238 |
| ,, *Vitriol* | | 18 |
| *Oils (group)* | | 221 |
| *Ointments (group)* | | 321 |
| *Ointment of Carbolic Acid* | | 8 |
| ,, *Goa Powder* | | 53 |
| ,, *Chrysophanic acid* | | 53 |
| *Olea Europæa* | | 222 |
| *Olea (group)* | | 221 |
| *Oleate of Mercury* | | 172 |
| ,, *Zinc* | | 330 |
| *Oleoresina Capsici* | | 89 |
| ,, *Filicis* | | 152 |
| ,, *Zingiberis* | | 333 |
| Oleum Amygdalæ | 2 to 4 drms. | 43 |
| ,, Anethi | 1 to 4 minims | 45 |
| ,, Anisi | 1 to 4 minims | 45 |
| ,, Anthemidis | 2 to 4 minims | 46 |
| ,, *Anthos* | | 271 |
| ,, *Bals. Copaibæ* | | 118 |
| ,, *Betulæ Albæ* | | 68 |
| ,, *Cacao* | | 315 |
| ,, *Cadinum* | | 189 |
| ,, Cajuputi | 1 to 3 minims | 75 |
| ,, *Camphoratum* | | 83 |
| ,, Carui | 2 to 4 minims | 92 |
| ,, Caryophylli | 1 to 4 minims | 92 |
| ,, Cinnamomi | 1 to 4 minims | 110 |
| ,, *Citri* | | 194 |
| ,, Copaibæ | 5 to 20 minims | 118 |
| ,, Coriandri | 1 to 4 minims | 118 |
| ,, Crotonis | ½ to 1 minim | 122 |
| ,, Cubebæ | 5 to 20 minims | 123 |
| ,, *Dugong* | | 128 |
| ,, *Erigerontis Canadensis* | | 133 |
| ,, *Filicis Maris. See* Extractum | | 152 |
| ,, *Gynocardiæ* | | 164 |
| ,, *Jecoris Aselli* | | 216 |
| ,, Juniperi | 1 to 3 minims | 188 |
| ,, ,, *empyreum* | | 189 |
| ,, Lavandulæ | 1 to 4 minims | 193 |
| ,, Limonis | 1 to 4 minims | 194 |
| ,, Lini | | 197 |
| ,, *Macidis* | | 218 |
| ,, *Macidis Æthereum* | | 218 |
| ,, Menthæ Piperitæ | 1 to 4 minims | 209 |
| ,, ,, Viridis | 1 to 4 minims | 210 |

| OL to OR | Dose. | Page |
|---|---|---|
| Oleum Morrhuæ | 1 to 4 drms. | 216 |
| ,, Myristicæ | 2 to 6 minims | 218 |
| ,, ,, expressum | | 218 |
| ,, *Nucis Moschatæ* | | 218 |
| ,, Olivæ | ½ to 1 oz. | 222 |
| ,, Phosphoratum | 5 to 10 minims | 234 |
| ,, Pimentæ | 1 to 3 minims | 237 |
| ,, *Pini Sylvestris* | | 238 |
| ,, Ricini | Infant, 1 to 3 drms. Adult, ½ to 1 oz. | 268 |
| ,, Rosmarini | 2 to 5 minims | 271 |
| ,, Rutæ | 2 to 6 minims | 271 |
| ,, Sabinæ | 1 to 5 minims | 272 |
| ,, *Santal. flav.* | | 275 |
| ,, Sinapis | | 287 |
| ,, ,, *Æthereum* | | 287 |
| ,, *Staphisagria* | | 302 |
| ,, *Succini* | | 306 |
| ,, Terebinthinæ | 10 to 30 minims. Anthelm. 2 to 4 drms. | 314 |
| ,, Theobromæ | | 315 |
| ,, *Tiglii* | | 122 |
| Olivæ Oleum | ½ to 1 oz. | 222 |
| *Onguent Basilicum* | | 265 |
| *Ophelia Chirata* | | 100 |
| *Opianic Acid* | | 224 |
| *Opianine* | | 224 |
| Opii *Aqua* | | 228 |
| ,, Confectio | 5 to 20 grs. | 225 |
| ,, Emplastrum | | 225 |
| ,, Enema | | 226 |
| ,, Extractum | ½ to 1 gr. | 226 |
| ,, ,, liquidum | 10 to 40 minims | 226 |
| ,, Linimentum | | 226 |
| ,, *Liquor Sedativus* | | 228 |
| ,, *Pilula*, now Pil. Sapon. comp. | | 226 |
| ,, Pulv. comp. | 2 to 5 grs. | 226 |
| ,, Tinctura | 5 to 30 minims | 227 |
| ,, ,, Ammoniata | ½ to 1 drm. | 227 |
| ,, Trochisci | 1 or 2 loz. | 227 |
| ,, *Unguentum* | | 228 |
| ,, Vinum | 10 to 40 minims | 227 |
| ,, ,, *sine Aromatic.* | | 227 |
| Opium | ½ to 2 grs. | 223 |
| ,, *Group of Preparations, with Proportions* | | 228 |
| ,, *Therapeutical Equivalents of* | | 214 |
| *Opodeldoc. See* Linimentum Saponis | | 277 |
| ,, *Arnica* | | 57 |
| ,, *Steer's* | | 278 |
| *Orange, preparations of* | | 60—61 |
| *Orge Perlé* | | 167 |
| *Orme Champêtre* | | 321 |

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| OS to PA | Dose. | Page |
|---|---|---|
| Os Ustum | | 229 |
| Ovi Albumen | | 28 |
| ,, Vitellus | | 229 |
| Ox bile purified | | 136 |
| Oxalate of Cerium | | 97 |
| Oxide of Antimony | | 47 |
| ,, Bismuth | | 70 |
| ,, *Ethyl* | | 27 |
| ,, Silver | | 55 |
| ,, Zinc | | 330 |
| ,, ,, *Soap* | | 278 |
| *Oxyde Noir de Fer* | | 143 |
| ,, *Rouge de Mercure* | | 173 |
| *Oxydum Ferri Nigrum* | | 143 |
| ,, *Magnesicum Ponderosum* | | 203 |
| *Oxygenated Lard* | | 26 |
| Oxymel | 1 to 2 drms. | 209 |
| ,, Scillæ | ½ to 1 drm. | 282 |
| Pale Catechu | | 95 |
| ,, Cinchona Bark | | 108 |
| *Panis Cataplasma* | | 136 |
| *Pancreatic Emulsion* | | 230 |
| *Pancreatine* | | 229 |
| *Pancreatized Fat* | | 230 |
| *Papaver Rhœas* | | 268 |
| ,, *somniferum* | | 230 |
| *Paparerin* | | 224 |
| Papaveris Capsulæ | | 230 |
| ,, Decoctum | | 231 |
| ,, ,, *concentratum* | | 231 |
| ,, Extractum | 2 to 5 grs. | 231 |
| ,, ,, *liquidum* | | 231 |
| ,, Syrupus | 1 drm. | 231 |
| *Paper of Atropine* | | 59 |
| ,, *Calabar* | | 236 |
| *Papier d'Albespeyres* | | 88 |
| ,, *Épispastique* | | 87 |
| *Papiers Carbonifères* | | 90 |
| *Paramorphia* | | 224 |
| *Paregoric Elixir* | | 84 |
| ,, *Scotch* | | 227 |
| Pareiræ Decoctum | 1 to 2 oz. | 232 |
| ,, Extractum | 10 to 20 grs. | 232 |
| ,, ,, liquidum | ½ to 2 drms. | 232 |
| ,, Radix | 30 to 60 grs. | 232 |
| *Parietaria* | | 233 |
| *Parrish's Chemical Food* | | 148 |
| *Parsley Breakstone* | | 29 |
| *Pasta Caustica* | | 251 |
| *Paste, Arsenical, Frères Come's* | | 6 |

**Official Names in Roman; all others in Italics.**

| PA to PH | Dose. | Page |
|---|---|---|
| *Paste, Arsenical, for Dentists* | | 6 |
| *Pastilles, Schuster's* | | 22 |
| ,, *de Dethan* | | 254 |
| *Paullinia Sorbilis* | | 163 |
| *Pavòt* | | 230 |
| Pearl Barley | | 167 |
| *Pearson's Solution* | | 291 |
| ,, *Cerate* | | 244 |
| *Pegu Catechu* | | 96 |
| *Pelletierin, Tannate of* | | 161 |
| *Pellitory of the Wall* | | 233 |
| Pellitory Root | | 259 |
| *Pellitory of Spain* | | 259 |
| *Pencils of Croton Oil* | | 123 |
| Pepper, Black | | 238 |
| Peppermint Essence | | 209 |
| ,, *Preparations* | | 209 |
| Pepsine | 2 to 5 grs. | 233 |
| ,, *de Boudault* | | 233 |
| ,, *Porci* | | 233 |
| *Pepsine-Squire* | | 233 |
| Perchloride of Mercury | | 174 |
| *Percolation, instructions for* | | 318 |
| *Periwinkle, Great* | | 327 |
| Permanganate of Potash | | 255 |
| Peru Balsam | | 62 |
| *Pessus Acidi Tannici* | | 22 |
| ,, *Glycerini* | | 158 |
| ,, *Hydrargyri Bromidi* | | 169 |
| ,, ,, *Bibromidi* | | 169 |
| ,, *Plumbi Acet.* | | 241 |
| ,, ,, ,, *c. Opio* | | 241 |
| ,, ,, *Iodidi* | | 243 |
| ,, *Potassii Bromidi* | | 247 |
| ,, ,, *Iodidi* | | 249 |
| ,, *Sodæ Bicarbonatis* | | 292 |
| *Peumus Fragrans* | | 71 |
| *Phenic Acid* | | 7 |
| *Phenol* | | 7 |
| *Phenyl, Hydrate of* | | 7 |
| *Phenylic Alcohol* | | 7 |
| *Phosphas Natricus* | | 296 |
| *Phosphate de Chaux* | | 80 |
| *Phosphate de Soude* | | 296 |
| Phosphate of Ammonia | 5 to 20 grs. | 42 |
| ,, Iron | | 147 |
| ,, Lime | | 80 |
| ,, Soda | | 295 |
| *Phosphori Pilula c. Sævo* | | 235 |
| Phosphoric Acid, diluted | 10 to 30 minims | 16 |

| PH to PI | Dose. | Page |
|---|---|---|
| Phosphoric Acid (*Glacial*) | | 17 |
| ,, ,, (*Metaphosphoric*) | | 17 |
| ,, ,, (*Orthophosphoric*) | | 17 |
| Phosphorus | | 234 |
| ,, Oil | 5 to 10 minims | 234 |
| ,, Pill | 3 to 6 grs. | 234 |
| *Physalis Alkakengi* | | 235 |
| ,, ,, *Tinctura* | | 235 |
| *Physeter Macrocephalus* | | 98 |
| *Physostigma Venenosum* | | 235 |
| Physostigmatis Extractum | $\frac{1}{16}$ to $\frac{1}{4}$ gr. | 235 |
| ,, Faba | 1 to 4 grs. | 235 |
| ,, *Injectio* | | 236 |
| ,, *Tinctura* | 10 minims | 236 |
| *Phytolaccin* | | 347 |
| Picis *Capsulæ* | | 240 |
| ,, Emplastrum | | 239 |
| ,, Liquidæ *Aqua* | | 239 |
| ,, ,, *Unguentum* | | 239 |
| ,, *Pilulæ* | | 240 |
| *Picræna excelsa* | | 260 |
| *Pierre Divine* | | 125 |
| *Pills (group)* | | 236 |
| *Pilocarpiæ Guttæ* | | 187 |
| *Pilocarpine* | | 187 |
| *Pilocarpus Pinnatifolius* | | 187 |
| *Pilulæ (group)* | | 236 |
| ,, Aloes Barbadensis | 4 to 8 grs. | 30 |
| ,, ,, *diluta. See* Pil. Aloes Barbadensis | | 30 |
| ,, ,, et Assafœtidæ | 5 to 10 grs. | 32 |
| ,, ,, et Ferri | 5 to 10 grs. | 30 |
| ,, ,, et Myrrhæ | 5 to 10 grs. | 32 |
| ,, ,, *c. Sapone* | | 31 |
| ,, ,, Socotrinæ | 5 to 10 grs. | 31 |
| ,, *Alterans Plummeri* | | 176 |
| ,, *Antimonii comp. See* Pil. Hydrarg. Subchlor. Comp. | | 176 |
| ,, Assafœtidæ composita | 5 to 10 grs. | 58 |
| ,, *Calomelanos composita. See* Pil. Hydrarg. Subchloridi Comp. | | 176 |
| ,, Cambogiæ composita | 5 to 10 grs. | 82 |
| ,, *Carbonatis Ferrosi* | | 140 |
| ,, Colocynthidis composita | 5 to 10 grs. | 114 |
| ,, ,, et Hyoscyami | 5 to 10 grs. | 115 |
| ,, Conii composita | 5 to 10 grs. | 116 |
| ,, *Cupri comp.* | | 125 |
| ,, *Crotonis* | | 123 |
| ,, *Digitalis comp.* | | 128 |
| ,, *Elaterii* | | 130 |
| ,, ,, *Comp.* | | 130 |
| ,, Ferri Carbonatis | 5 to 20 grs. | 140 |
| ,, ,, Iodidi | 3 to 8 grs. | 142 |

| PI to PL | Dose. | Page |
|---|---|---|
| Pilulæ Ferri *Redacti* | | 151 |
| ,, *Galbani composita.* *See* Pil. Assaf. Co. | | 58, 154 |
| ,, Hydrargyri | Alterative, 3 to 8 grs. Purgative, 10 grs. | 168 |
| ,, ,, *Iodidi* | | 171 |
| ,, ,, Subchloridi composita | 5 to 10 grs. | 176 |
| ,, ,, ,, *c. Colocynth* | | 176 |
| ,, ,, ,, *c. Jalapâ* | | 177 |
| ,, ,, ,, *c. Scammoniâ* | | 177 |
| ,, *Hydrargyricæ* | | 169 |
| ,, Ipecacuanhæ c. Scillâ | 5 to 10 grs. | 186 |
| ,, *Jalapæ c. Calomel* | | 188 |
| ,, *Odontalgicæ* | | 226 |
| ,, *Opii comp.* *See* Pil. Saponis composita | | 226 |
| ,, Phosphori | 3 to 6 grs. | 234 |
| ,, ,, *c. Sævo* | | 235 |
| ,, *Picis* | | 240 |
| ,, Plumbi c. Opio | 4 grs. | 241 |
| ,, *Plummeri.* *See* Pil. Hyd. Subchl. Co. | | 176 |
| ,, Quiniæ | 2 to 10 grs. | 263 |
| ,, Rhei composita | 5 to 10 grs. | 266 |
| ,, *Rufi* | | 32 |
| ,, Saponis composita | 3 to 5 grs. | 226 |
| ,, Scammonii Compos. | | 281 |
| ,, Scillæ composita | 5 to 10 grs. | 282 |
| *Pilules des Bontius* | | 82 |
| ,, *de Protocarbonate de Fer* | | 140 |
| ,, *de Protoiodure de Fer* | | 142 |
| *Piment de la Jamaïque* | | 237 |
| Pimenta | 10 to 30 grs. | 237 |
| Pimentæ Aqua | 1 to 2 oz. | 237 |
| ,, Oleum | 1 to 3 minims | 237 |
| *Pimpinella Anisum* | | 45 |
| *Pini Resina* | | 238 |
| *Pinus maritima* | | 239 |
| ,, *Palustris* | | 239, 314 |
| ,, *Pinaster* | | 314 |
| ,, *Sylvestris* | | 238, 239 |
| ,, *Tæda* | | 239, 314 |
| Piper Nigrum | 5 to 20 grs. | 238 |
| ,, *Hispanicum* | | 88 |
| Piperis Confectio | 60 to 120 grs. | 238 |
| *Pissenlit* | | 313 |
| *Pistacia Lentiscus* | | 207 |
| Pitch Burgundy | | 238 |
| ,, *Black* | | 239 |
| *Pix Alba* | | 238 |
| ,, Burgundica | | 238 |
| ,, liquida | 20 to 60 minims | 239 |
| *Placenta Lini Seminis* | | 196 |
| *Plasma.* *See* Glycerinum Amyli | | 44 |

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| PL to PO | Dose. | Page |
|---|---|---|
| *Plasters (group)* | | 131 |
| Plumbi Acetas | 1 to 4 grs. | 240 |
| „ Acetatis *Lotio* | | 241 |
| „ „ *Pessus* | | 241 |
| „ „ Unguentum | | 241 |
| „ *Aqua* | | 244 |
| „ Carbonas | | 242 |
| „ Carbonatis Unguentum | | 242 |
| „ *Diacetatis Liquor* | | 244 |
| „ „ *Lotio* | | 245 |
| „ Emplastrum | | 243 |
| „ *Gargarisma* | | 245 |
| „ Iodidi Emplastrum | | 242 |
| „ „ *Pessus* | | 243 |
| „ „ Unguentum | | 242 |
| „ Iodidum | | 242 |
| „ *Lotio Diacetatis* | | 245 |
| „ Nitras | | 243 |
| „ Oxidum | | 243 |
| „ Pil. c. Opio | 4 grs. | 241 |
| „ *Subacetas liquidus* | | 244 |
| „ Subacetatis *Glycerinum* | | 245 |
| „ „ Liquor | | 244 |
| „ „ „ dilutus | | 244 |
| „ „ Unguentum comp. | | 245 |
| „ Suppositoria comp. | 3 grs. in each. 1 gr. Opium | 241 |
| *Plumbum* | | 240 |
| „ *Acetum Solutum* | | 244 |
| „ *Aceticum* | | 241 |
| „ „ *Basicum Solutum* | | 244 |
| „ *Carbonicum* | | 242 |
| „ *Iodatum* | | 242 |
| Podophylli Radix | 10 to 20 grs. | 245 |
| „ Resina | ⅛ to 2 grs. | 245 |
| „ *Suppositorium* | | 246 |
| „ *Tinctura* | | 246 |
| *Podophyllum Peltatum* | | 245 |
| *Poh di Bahia* | | 53 |
| *Poivre Noir* | | 238 |
| „ *de Guinée* | | 88 |
| *Poix de Bourgogne* | | 238 |
| „ *Resine* | | 264 |
| *Polygala Senega* | | 283 |
| Pomegranate Root Bark | | 160 |
| *Pommade Epispastique Jaune* | | 88 |
| „ *de Carbonate de Plomb* | | 242 |
| „ *Epispastique Verte* | | 88 |
| „ *d'Iodure de Potassium Iodurée* | | 184 |
| „ *de Goudron* | | 239 |
| „ *Mecuriale Faible* | | 169 |

**Official Names in Roman; all others in Italics.**

| PO | Dose. | Page |
|---|---|---|
| *Pommade Stibiée* | | 50 |
| ,, *de Soufre* | | 307 |
| Poppy Capsules | | 230 |
| ,, Petals, Red | | 268 |
| *Potash Water* | | 253 |
| Potassa. *See* Potassa Caustica | | 249 |
| ,, Caustica | | 249 |
| ,, *c. Calce* | | 250 |
| ,, Sulphurata | 3 to 8 grs. | 251 |
| Potassæ Acetas | 10 to 20 grs. | 251 |
| ,, *Arsenitis Liquor* | | 5 |
| ,, *Benzoas* | | 252 |
| ,, Bicarbonas | 10 to 20 grs. | 252 |
| ,, Bichromas | | 253 |
| ,, *Bitartras. See* Potassæ Tartras Acida | | 257 |
| ,, *Boro-tartras. Soluble Cream of Tartar* | | 258 |
| ,, Carbonas | 5 to 12 grs. | 253 |
| ,, Chloras | 10 to 20 grs. | 253 |
| ,, Chloratis Trochisci. 5 grs. in each. | 1 to 6 loz. | 254 |
| ,, ,, *Gargarisma* | | 254 |
| ,, Citras | 20 to 60 grs. | 254 |
| ,, *Hydras. See* Potassa Caustica | | 249 |
| ,, Liquor | | 249 |
| ,, ,, *Brandish* | | 250 |
| ,, ,, Effervescens | 5 to 10 oz. | 253 |
| ,, Nitras | 5 to 20 grs. | 255 |
| ,, ,, *for Spray* | | 255 |
| ,, *Nitratis Gargarisma* | | 255 |
| ,, Permanganas | 1 to 2 grs. | 255 |
| ,, Permanganatis Liquor | 2 to 4 drms. | 256 |
| ,, *Prussias Flava* | | 256 |
| ,, *Subcarbonas* | | 253 |
| ,, Sulphas | 10 to 20 grs. | 256 |
| ,, *Sulphis* | | 257 |
| ,, Sulphuratæ Unguentum | | 251 |
| ,, Tartras | Alterative, 20 to 60 grs. Purgative, 120 to 200 grs. | 257 |
| ,, ,, Acida | Diuretic, 20 to 60 grs. Aperient, 60 to 120 grs. | 257 |
| Potassii *Bromidi Pessus* | | 247 |
| ,, Bromidum | 20 to 60 grs. | 247 |
| ,, *Cyanidum Purum* | | 247 |
| ,, *et Sodii Tart.* | | 290 |
| ,, *Ferrocyanidum* | | 247 |
| ,, Iodidi Linimentum c. Sapone | | 248 |
| ,, ,, *Pessus* | | 249 |
| ,, ,, Unguentum | | 249 |
| ,, Iodidum | 2 to 10 grs. | 248 |
| *Potassium* | | 246 |
| *Potion Gommeuse* | | 2 |
| *Poudre Antimoniale de James* | | 47 |
| ,, *de Craie* | | 121 |

| PO to PU | Dose. | Page |
|---|---|---|
| *Poudre de Dower* | | 186 |
| *Powders (group)* | | 259 |
| Precipitated Carbonate of Lime | | 78 |
| ,, Sulphur | | 306 |
| Prepared Chalk | | 120 |
| ,, Lard | | 25 |
| ,, *Sulphuret of Antimony* | | 48 |
| Proof Spirit | | 301 |
| *Protochlorure de Mercure* | | 176 |
| *Protoiodure de Mercure* | | 171 |
| *Pruni Virginianæ Cortex* | | 258 |
| ,, ,, *Syrupus* | | 258 |
| Prunum | | 258 |
| *Prunus Domestica* | | 258 |
| ,, *Laurocerasus* | | 193 |
| *Prussiate of Potash, yellow* | | 256 |
| *Prussic Acid* | | 13 |
| Pterocarpi Lignum | | 259 |
| *Pterocarpus Marsupium* | | 189 |
| ,, *Santalinus* | | 259 |
| *Pulveres (group)* | | 259 |
| Pulvis Amygdalæ compositus | 60 to 120 grs. | 43 |
| ,, Antimonialis | 2 to 6 grs. | 47 |
| ,, *Aromaticus. See* Pulv. Cinnam. comp. | | 110 |
| ,, Catechu compositus | 20 to 40 grs. | 95 |
| ,, Cinnamomi comp. | 3 to 10 grs. | 110 |
| ,, Cretæ Aromaticus | 30 to 60 grs. | 121 |
| ,, ,, ,, c. Opio | 10 to 40 grs. | 121 |
| ,, *Doveri* | | 186 |
| ,, Elaterii Comp. | | 130 |
| ,, Glycyrrhizæ Compositus | | 159 |
| ,, *Gregorii* | | 267 |
| ,, Ipecacuanhæ compositus<br>,, ,, *c. Opio* | 5 to 10 grs. | 186 |
| ,, ,, *Opiatus* | | 186 |
| ,, ,, *Thebaicus* | | 186 |
| ,, *Jacobi* | | 47 |
| ,, Jalapæ compositus | 20 to 60 grs. | 188 |
| ,, Kino compositus<br>,, ,, *c. Opio* | 5 grs. | 190 |
| ,, *Liquiritiæ compositus* | | 160 |
| ,, *Magnesiæ c. Rheo pro infantibus* | | 267 |
| ,, Opii compositus | 2 to 5 grs. | 226 |
| ,, *Pectoralis Kurellæ* | | 169 |
| ,, Rhei compositus | 30 to 60 grs. | 267 |
| ,, *Salinus Anticholericus* | | 292 |
| ,, Scammonii compositus | 10 to 20 grs. | 280 |
| ,, Tragacanthæ compositus | 10 to 60 grs. | 320 |
| *Punica Granatum* | | 160 |
| Pure Ether | | 27 |

**Official Names in Roman; all others in Italics.**

| PU to RE | Dose. | Page |
|---|---|---|
| Pure Silver | | 55 |
| Purified Animal Charcoal | | 89 |
| „ Ox Bile | | 136 |
| Pyrethri Radix | | 259 |
| ,, Tinctura | | 260 |
| *Pyrethrum Roseum* | | 260 |
| *Pyrogallic Acid* | | 17 |
| *Pyroleum Pini* | | 239 |
| *Pyroligneous Acid purified* | | 3 |
| Pyroxylin | | 260 |
| *Quassia Amara* | | 260 |
| Quassiæ Extractum | 3 to 5 grs. | 260 |
| ,, Infusum | 1 to 2 oz. | 261 |
| ,, Lignum | | 260 |
| ,, Tinctura | 1 to 2 drms. | 261 |
| Quercus Cortex | 30 to 120 grs. | 261 |
| ,, Decoctum | 1 to 2 oz. | 261 |
| ,, ,, *Aluminatum* | | 261 |
| ,, *Infectoria* | | 154 |
| ,, *Pedunculata* | | 261 |
| *Quillaya Saponaria* | | 261 |
| ,, *Tinctura* | | 262 |
| *Quince Seed* | | 126 |
| *Quinetum* | | 264 |
| Quiniæ *Arsenias* | | 263 |
| ,, *Carbolas* | | 263 |
| ,, Citras | | 263 |
| ,, *Dikinatis Syrupus* | | 264 |
| ,, *Hydriodatis Syrupus* | | 264 |
| ,, Pilula | 2 to 10 grs. | 263 |
| ,, *Salicylas* | | 263 |
| ,, Sulphas | 1 to 5 grs. | 262 |
| ,, ,, *Neutr.* | | 264 |
| ,, Tinctura | 1 to 1½ drms. | 263 |
| ,, ,, Ammoniata | 1 to 2 drms. | 263 |
| ,, *Valerianas* | | 264 |
| ,, Vinum | ½ to 1 oz. | 263 |
| *Quinidine, Sulphate of* | | 106 |
| *Quinquina, Teinture de* | | 108 |
| *Raifort* | | 56 |
| Raisins | | 323 |
| Rectified Spirit | | 300 |
| Red Cinchona Bark | | 109 |
| ,, *Gum* | | 164 |
| ,, Iodide of Mercury | | 169 |
| ,, Oxide of Mercury | | 173 |
| ,, Poppy Petals | | 268 |
| ,, Rose Petals | | 270 |
| ,, Sandal-wood | | 259 |
| Reduced Iron | | 150 |

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| RE to RO | Dose. | Page |
|---|---|---|
| Resina | | 264 |
| ,, *Alba* | | 264 |
| ,, Jalapæ | 2 to 5 grs. | 188 |
| ,, *Mastix* | | 207 |
| ,, *Pini* | | 238, 264 |
| ,, Podophylli | ⅙ to ½ gr. | 245 |
| ,, Scammoniæ | | 281 |
| Resinæ Emplastrum | | 264 |
| ,, Unguentum | | 264 |
| Rhamni Succus | | 265 |
| ,, Syrupus | 1 drm. | 265 |
| *Rhamnus catharticus* | | 265 |
| ,, *Frangula* | | 265 |
| ,, ,, *Decoctum* | | 265 |
| ,, ,, *Extract Fluid* | | 265 |
| *Rhatania. See* Krameria | | 190 |
| Rhatany Root | | 190 |
| Rhei Extractum | 3 to 6 grs. Br. Ph. dose 5 to 20 grs. | 266 |
| ,, ,, *Compositum* | | 268 |
| ,, Infusum | 1 to 2 oz. | 266 |
| ,, Pilula comp. | 5 to 10 grs. | 266 |
| ,, Pulv. comp. | ½ to 1 drm. 5 to 10 grs. for a child. | 266 |
| ,, Radix | Stom. 1 to 5 grs. Purg. 10 to 20 grs. | 266 |
| ,, Syrupus | 1 to 4 drms. | 267 |
| ,, ,, *Aromat.* | | 267 |
| ,, ,, *Comp.* | | 267 |
| ,, Tinctura | 1 to 2 drms. | 267 |
| ,, ,, *Vinosa* | | 267 |
| ,, Vinum | 1 to 2 drms. | 267 |
| *Rheum Ponticum* | | 266 |
| Rhœados Petala | | 268 |
| ,, Syrupus | 1 to 2 drms. | 268 |
| Rhubarb | | 266 |
| Ricini *Decoctum* | | 269 |
| ,, *Olei Emulsiones* | | 269 |
| ,, Oleum | Adult, ½ to 1 oz. Infant, 1 to 3 drms. | 268 |
| *Ricinus Communis* | | 268 |
| *Rochelle Salt* | | 290 |
| *Rock Salt, Pure* | | 297 |
| *Rosa Canina* | | 269 |
| ,, *Centifolia* | | 269 |
| ,, *Gallica* | | 270 |
| Rosæ Aqua | 1 to 2 oz. | 270 |
| ,, Caninæ Fructus | | 269 |
| ,, ,, Confectio | 60 grs. | 269 |
| ,, Centifoliæ Petala | | 269 |
| ,, Gallicæ Confectio | ½ to 1 drm. | 270 |
| ,, ,, Petala | | 270 |
| ,, Infusum Acid. | 1 to 2 oz. | 270 |
| ,, ,, *c. Acido Nitrico* | | 271 |

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| RO to SA | Dose. | Page |
|---|---|---|
| Rosæ Syrupus | 1 to 2 drms. | 270 |
| *Rose Pâle* | | 269 |
| Rosmarini *Ætheroleum* | | 271 |
| ,, *essentia* | | 271 |
| ,, Oleum | 2 to 5 minims | 271 |
| ,, Spiritus | 10 to 30 minims | 271 |
| *Rosmarinus Officinalis* | | 271 |
| *Rottlera Tinctoria* | | 189 |
| *Rouge* | | 146 |
| Rue, Oil of | | 271 |
| *Rufi Pilula* | | 32 |
| *Rumicin* | | 347 |
| *Ruta graveolens* | | 271 |
| Rutæ *Confectio* | | 271 |
| ,, *Enema* | | 271 |
| ,, Oleum | 2 to 6 minims | 271 |
| ,, *Syrupus* | | 272 |
| Sabadilla | 4 to 6 grs. | 272 |
| Sabinæ cacumina | 5 to 10 grs. powder | 272 |
| ,, Oleum | 1 to 5 minims | 272 |
| ,, Tinctura | 15 to 30 minims | 272 |
| ,, Unguentum | | 273 |
| Saccharated Carbonate of Iron | | 138 |
| ,, Solution of Lime | | 79 |
| *Sacchari Fæx* | | 315 |
| Saccharum Lactis | 1 to 2 drms. | 273 |
| ,, *officinarum* | | 273 |
| ,, purificatum | | 273 |
| *Sachets de Charpie Carbonifères* | | 90 |
| Saffron | | 122 |
| *Safran* | | 122 |
| *St. Ignatius's bean* | | 221 |
| *St. John Long's Liniment* | | 315 |
| *Sal Ammoniac* | | 36 |
| ,, *Enixum* | | 257 |
| ,, *Polychrestum* | | 257 |
| ,, ,, *Seignetti* | | 290 |
| ,, *Volatile* | | 39 |
| *Salep* | | 274 |
| *Salicinum* | | 274 |
| *Salicylic Acid* | | 17 |
| *Salicylate of Soda* | | 296 |
| *Salix Alba* | | 274 |
| Salt | | 297 |
| ,, *of Tartar* | | 253 |
| ,, *of Wormwood* | | 253 |
| *Saltpetre* | | 255 |
| Sambuci Aqua | | 275 |
| ,, Flores | | 274 |
| ,, *Unguentum* | | 275 |

**Official Names in Roman; all others in Italics.**

| SA to SC | Dose. | Page |
|---|---|---|
| *Sambuci Unguentum Viride* | | 275 |
| *Sambucus nigra* | | 274 |
| Sandal-wood, Red | | 259 |
| ,, ,, *White* | | 275 |
| *Sangsue medicinale* | | 166 |
| *Sanguinarin* | | 347 |
| *Sanguisuga officinalis* | | 167 |
| ,, *medicinalis* | | 166 |
| *Santal Rouge* | | 259 |
| *Santalum Album* | | 275 |
| Santonica | 10 to 60 grs. | 275 |
| *Santonini Trochisci* | | 276 |
| Santoninum | Infant, 2 to 3 grs. | 275 |
| *Sapo* | | 276 |
| ,, animalis | | 276 |
| ,, durus | 5 to 15 grs. | 276 |
| ,, *Hispanicus Albus* | | 277 |
| ,, *Jalapinus* | | 188 |
| ,, mollis | | 278 |
| Saponis Emplastrum | | 277 |
| ,, ,, Cerati | | 277 |
| ,, Linimentum | | 277 |
| ,, Pilula Comp. *See* Opium | | 226 |
| *Sarothamnus Scoparius* | | 232 |
| Sarsaparilla | | 278 |
| ,, *Indian* | | 166 |
| Sarsæ Decoctum | ½ to 1 pint | 278 |
| ,, ,, compositum | ½ to 1 pint | 278 |
| ,, Extractum liquidum | 1 to 4 drms. | 279 |
| ,, ,, ,, *compositum* | | 279 |
| ,, Radix | | 278 |
| Sassafras *officinale* | | 279 |
| ,, Radix | | 279 |
| Savin Tops | | 272 |
| *Savon Blanc de Marseilles* | | 277 |
| *Saxoleum Suspissatum* | | 324 |
| Scammoniæ Radix | | 280 |
| ,, Resina | 4 to 8 grs. | 281 |
| Scammonii Confectio | 10 to 30 grs. | 280 |
| ,, Mistura | 2 oz. | 281 |
| ,, Pilula Composita | 5 to 15 grs. | 281 |
| ,, Pulvis Compositus | 10 to 20 grs. | 280 |
| Scammonium | 5 to 10 grs. | 280 |
| *Schuster's Pastilles* | | 22 |
| Scilla | 1 to 2 grs. | 281 |
| Scillæ Acetum | 15 to 40 minims | 282 |
| ,, Oxymel | ½ to 1 drm. | 282 |
| ,, Pil. comp. | 5 to 10 grs. | 282 |
| ,, Syrupus | ½ to 1 drm. | 282 |
| ,, Tinctura | 15 to 30 minims | 282 |

**Official Names in Roman; all others in Italics.**

| SC to SI | Dose. | Page |
|---|---|---|
| Scoparii Cacumina | | 282 |
| ,, Decoctum | 2 to 4 oz. | 283 |
| ,, Succus | 1 to 2 drms. | 283 |
| *Scotch Paregoric* | | 227 |
| *Scott's Ointment* | | 169 |
| *Scutellarin* | | 347 |
| *Sebum Ovile* | | 286 |
| *Secale cereale* | | 131 |
| *Secale cornutum* | | 132 |
| *Secalis Cornuti Extractum* | | 132 |
| *Seidlitz Powder* | | 290 |
| *Seiglé Ergoté* | | 132 |
| *Semen Contra* | | 275 |
| ,, *Myristicæ* | | 218 |
| ,, *Strychni* | | 220 |
| *Senecionin* | | 347 |
| Senegæ Infusum | 1 to 2 oz. | 283 |
| ,, *Decoctum* | | 283 |
| ,, Radix | 15 to 20 grs. powder | 283 |
| ,, *Syrupus* | | 283 |
| ,, Tinctura | ½ to 2 drms. | 283 |
| Senna | | 283 |
| ,, *Alexandrina* | | 283 |
| ,, *Indica* | | 284 |
| ,, *Tinnivelly* | | 284 |
| Sennæ Confectio | 1 to 2 drms. | 284 |
| ,, Infusum | 1 to 2 oz. | 284 |
| ,, Mistura comp. | 1 to 1½ oz. | 284 |
| ,, Syrupus | 1 to 2 drms. | 285 |
| ,, Tinctura | 2 to 8 drms. | 285 |
| Serpentariæ Infusum | 1 to 2 oz. | 285 |
| ,, Radix | 10 to 15 grs. powder | 285 |
| ,, Tinctura | ½ to 2 drms. | 286 |
| *Sesquicarbonate of Ammonia* | | 59 |
| Sevum præparatum | | 286 |
| Sherry | | 326 |
| *Silver* | | 53 |
| ,, Nitrate of | | 54 |
| ,, Oxide of | | 55 |
| ,, Pure | | 55 |
| *Simabæ Cedronis Semen* | | 286 |
| *Simaruba* | | 286 |
| ,, *officinalis* | | 286 |
| *Simarubæ Infusum* | | 286 |
| *Sinapine* | | 89 |
| ,, *paper* | | 287 |
| Sinapis | | 286 |
| ,, *Ætheroleum* | | 286 |
| ,, *alba* | | 286 |
| ,, Cataplasma | | 287 |

| SI to SO | Dose. | Page |
|---|---|---|
| Sinapis Charta | | 287 |
| ,, *Charta*, U.S. | | 287 |
| ,, *Infusum* | | 287 |
| ,, Liniment. comp. | | 287 |
| ,, *nigra* | | 286 |
| ,, Oleum | | 287 |
| ,, *Spiritus* | | 287 |
| ,, *Unguentum* | | 287 |
| *Sirop Diacode* | | 231 |
| ,, *de Gomme* | | 2 |
| ,, *de Mûres* | | 212 |
| ,, *de Nerprun* | | 265 |
| ,, *de Rhubarbe composé* | | 267 |
| ,, *de Roses pâles* | | 270 |
| Slaked Lime | | 78 |
| *Slippery Elm* | | 321 |
| *Smilax officinalis* | | 278 |
| *Snake Root, Black* | | 23 |
| *Soap* | | 276 |
| ,, *Bark* | | 261 |
| ,, Curd | | 276 |
| ,, Hard | | 278 |
| ,, Soft | | 278 |
| *Soaps, various* | | 278 |
| Socotrine Aloes | | 30 |
| Soda caustica | | 289 |
| ,, ,, soluta | | 289 |
| ,, *preparations* (*group*) | | 288 |
| ,, Tartarata | 2 to 4 drms. | 290 |
| ,, *water* | | 292 |
| Sodæ Acetas | | 290 |
| ,, Arsenias | $\frac{1}{16}$ to $\frac{1}{8}$ gr. | 290 |
| ,, Arseniatis Liquor | 5 to 10 minims | 291 |
| ,, *Benzoas* | | 291 |
| ,, *Biboras. See* Borax | | 71 |
| ,, Bicarbonas | 10 to 30 grs. | 291 |
| ,, Bicarbonatis *Pessus* | | 292 |
| ,, ,, Trochisci | 1 to 6 oz. | 292 |
| ,, Carbonas | 10 to 30 grs. | 293 |
| ,, ,, exsiccata | 3 to 10 grs. | 293 |
| ,, Chloratæ Cataplasma | | 294 |
| ,, ,, Liquor | 10 to 20 minims | 293 |
| ,, Citro-tartras effervescens | 1 to 2 drms. | 294 |
| ,, *et Potassæ Tartras* | | 290 |
| ,, *Hydras* | | 289 |
| ,, Hypophosphis | | 295 |
| ,, *Hypophosphitis Solutio* | | 295 |
| ,, *Hyposulphis* | | 297 |
| ,, Liquor | $\frac{1}{2}$ to 1 drm. | 298 |
| ,, ,, effervescens | | 292 |

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Sodæ Nitras . . . . . . . 295
,, Phosphas . . . . ¼ to 1 oz. . . . . 295
,, *Salicylatum* . . . . . . . 296
,, *Sesquicarbonas* . . . . . . . 291
,, Sulphas . . . . ½ to 1 oz. . . . . 296
,, *Sulphis* . . . . . . . 296
,, *Sulphocarbolatis Mistura* . . . . . . . 10
,, ,, ,, *et Cinchonæ* . . . . . . . 10
,, Valerianas . . . . 1 to 5 grs. . . . . 297
Sodii *Bromidum* . . . . . . . 297
,, Chloridum . . . Tonic, 10 to 60 grs. Cathartic, 2 to 4 drms. 297
,, *Iodidum* . . . . . . . 298
*Sodium* . . . . . . . 288
Soft Soap . . . . . . . 278
*Solanum Dulcamara* . . . . . . . 129
,, *Vesicarium* . . . . . . . 235
*Solenostemma Argel* . . . . . . . 284
*Soluble Cream of Tartar* . . . . . . . 258
,, *Oxide of Iron* . . . . . . . 146
,, *Tartar* . . . . . . . 257
*Solutio Acidi Bromohydrici* . . . . . . . 72
,, *Chloreti Ferri Spirituosa* . . . . . . . 144
,, *Ferri Bromidi* . . . . . . . 138
,, *Hydrargyri Iodidi Rubri* . . . . . . . 170
,, *Hydratis Calcici* . . . . . . . 79
,, *Hydratis Kalici* . . . . . . . 250
,, *Hydratis Natrici* . . . . . . . 289
,, *Iodi Spirit* . . . . . . . 184
,, *Nitratis Hydrargyrosi* . . . . . . . 171
,, *Sodæ Hypophosphitis* . . . . . . . 295
,, *solventis mineralis* (*De Valangin*) . . . . . . . 6
*Solutions* (*group*) . . . . . . . 197
Solution of Acetate of Ammonia . . . . 2 to 6 drms. . . . . 37
,, ,, ,, ,, *Concentrated* . . . . . . . 39
,, ,, ,, Morphia . . . . . . . 213
,, ,, ,, ,, *for Hypodermic injection* . . . . . 212, 213
,, ,, Ammonia . . . . . . . 40
,, ,, ,, stronger . . . . . . . 40
,, ,, Arsenic (Liquor Arsenicalis) . 2 to 8 minims . . . . . 5
,, ,, ,, Hydrochloric . . . 2 to 8 minims . . . . . 5
,, ,, ,, *and Iodide of Mercury* . . . . . . . 6
,, ,, *Arsenite of Ammonia* . . . . . . . 6
,, ,, ,, *of Potash* . . . . . . . 5
,, ,, Arseniate of Soda . . . . . . . 291
,, ,, *Bimeconate of Morphia* . . . . . . . 228
,, ,, ,, ,, *for Hypodermic injection* . . . . . 228
,, ,, *Bromide of Iron* . . . . . . . 138
,, ,, *Bromohydric Acid* . . . . . . . 72
,, ,, Chloride of Antimony . . . . . . . 48
,, ,, ,, *of Arsenic* . . . . . . . 6

| SO to SP | Dose. | Page |
|---|---|---|
| Solution of Chlorinated Lime | | 76 |
| ,, ,, ,, Soda | | 293 |
| ,, ,, Chlorine | | 102 |
| ,, ,, *Chloroxyde of Iron* | | 145 |
| ,, ,, Citrate of Ammonia | | 40 |
| ,, ,, ,, ,, Magnesia | | 205 |
| ,, *De Valangin* | | 6 |
| ,, *of Dialysed Iron* | | 145 |
| ,, *Donovan's* | | 6 |
| ,, *Fowler's* | | 5 |
| ,, of Lime | | 79 |
| ,, ,, ,, Saccharated | | 79 |
| ,, *Lugol's* | | 184 |
| ,, Pernitrate of Iron | | 145 |
| *Soude Caustique Liquide* | | 289 |
| *Soufre Lavé* | | 307 |
| ,, *Précipitaté* | | 306 |
| *Sous-acétat de Plomb Liquide* | | 244 |
| *Sous-nitrate de Bismuth* | | 69 |
| *Spas of Europe* | | 348 |
| Spearmint Oil | | 210 |
| ,, Water | | 210 |
| *Specific gravities* | | xxvi, xxvii |
| Spermaceti | | 98 |
| *Spirit of Hartshorn* | | 39 |
| ,, *of Salt* | | 12 |
| ,, *of Sal Volatile* | | 39 |
| *Spiritus (group)* | | 298, 301 |
| ,, Ætheris | 30 to 60 minims | 28 |
| ,, ,, *Chlorati* | | 28 |
| ,, ,, *Compositus* | | 28 |
| ,, ,, *Muriaticus* | | 28 |
| ,, ,, *Nitrici*. *See* Sp. Æth. Nitrosi | | 299 |
| ,, ,, Nitrosi | ½ to 2 drms. | 299 |
| ,, Ammoniæ Aromaticus | 20 to 60 minims | 39 |
| ,, ,, Fœtidus | ½ to 1 drm. | 41 |
| ,, Armoraciæ compositus | 1 to 3 drms. | 56 |
| ,, Cajuputi | 30 to 60 minims | 75 |
| ,, Camphoræ | 10 to 30 minims | 83 |
| ,, ,, *Fortior* | | 84 |
| ,, Chloroformi | 10 to 60 minims | 104 |
| ,, *Frumenti* | | 300 |
| ,, Juniperi | 30 to 60 minims | 189 |
| ,, ,, *comp.* | | 189 |
| ,, Lavandulæ | 30 to 60 minims | 193 |
| ,, ,, *comp.* | | 194 |
| ,, Menthæ Piperitæ | 30 to 60 minims | 209 |
| ,, *Mindereri* | | 37 |
| ,, Myristicæ | 30 to 60 minims | 218 |
| ,, Rectificatus, sp. g. ·838 | | 300 |

**Official Names in Roman; all others in Italics.**

| SP to SU | Dose. | Page |
|---|---|---|
| Spiritus Rosmarini | 10 to 30 minims | 271 |
| ,, *Sal Volatile* | | 39 |
| ,, *Salis Dulcis* | | 28 |
| ,, *Sinapis* | | 287 |
| ,, Tenuior, sp. g. ·920 | | 301 |
| ,, Vini Gallici | | 301 |
| ,, ,, ,, Mistura | $\frac{1}{2}$ to $1\frac{1}{2}$ oz. | 301 |
| *Spirit, Clutton's Febrifuge* | | 28 |
| ,, *Hoffmann's Anodyne* | | 28 |
| ,, *of Hartshorn* | | 39 |
| *Spray Potassæ Nitras* | | 255 |
| ,, *Producer, Dr. Dewar's* | | 20 |
| Squill | | 281 |
| *Squirting Cucumber* | | 129 |
| *Staphisagria* | | 302 |
| ,, *Oil of* | | 302 |
| *Star Anise* | | 45 |
| Starch | | 44 |
| *Stearine* | | 315 |
| *Steers' Opodeldoc* | | 278 |
| *Stevens' Powders* | | 292 |
| *Stibicum Oxidum* | | 47 |
| *Stibium Sulphuratum Aurantiacum* | | 49 |
| Storax | | 305 |
| Stramonii Extractum | $\frac{1}{4}$ gr. | 303 |
| ,, Folia | | 303 |
| ,, Semina | | 303 |
| ,, Tinctura | 10 to 20 minims | 303 |
| Stronger Solution of Ammonia | | 40 |
| ,, ,, Perchloride of Iron | | 143 |
| Strychnia | $\frac{1}{30}$ gr. | 304 |
| Strychniæ Liquor | 4 to 10 minims | 304 |
| ,, ,, *for subcutaneous injection* | | 304 |
| *Strychnos Nux-Vomica* | | 220 |
| *Styptic Colloid* | | 114 |
| Styrax *Benzoin* | | 67 |
| ,, præparatus | 10 to 20 grs. | 305 |
| *Subacetas Plumbi Liquidus* | | 244 |
| *Subcarbonate of Potash* | | 253 |
| Subchloride of Mercury | | 175 |
| *Sublimatus Corrosivus* | | 174 |
| *Sublimatum Corrosivum* | | 174 |
| Sublimed Sulphur | | 306 |
| Subnitrate of Bismuth | | 69 |
| *Succi (group)* | | 305 |
| *Succini Oleum* | | 306 |
| ,, *Tinctura* | | 306 |
| Succus *Aconiti* | | 23 |
| ,, Belladonnæ | | 65 |
| ,, Conii | 30 to 60 minims | 116 |
| ,, *Digitalis* | | 128 |

| SU | Dose. | Page |
|---|---|---|
| Succus Hyoscyami | | 179 |
| ,, *Lactucæ virosæ* | | 192 |
| ,, Limonis | ½ to 4 oz. | 195 |
| ,, Mori | | 212 |
| ,, Rhamni | | 265 |
| ,, Scoparii | 1 to 2 drms | 283 |
| ,, Taraxaci | 2 to 4 drms. | 313 |
| Suet, Prepared | | 286 |
| Sugar, Refined | | 273 |
| Sugar *of Lead* | | 240 |
| ,, of Milk | | 273 |
| *Suif de Mouton* | | 286 |
| *Sulfate de Potasse* | | 257 |
| ,, ,, *Zinc* | | 331 |
| *Sulfure de Potassium* | | 251 |
| *Sulphas Chinicus* | | 263 |
| ,, *Magnesicus* | | 205 |
| ,, *Natricus* | | 296 |
| ,, *Zincicus* | | 331 |
| Sulphate of *Alumina and Ammonia* | | 33 |
| ,, ,, Atropia | | 59 |
| ,, ,, Beberia | | 63 |
| ,, ,, *Cinchonidine* | | 106 |
| ,, ,, Cinchonine | | 106 |
| ,, ,, Copper | | 124 |
| ,, ,, *Duboisine* | | 128 |
| ,, ,, *Hyoscyamine* | | 180 |
| ,, ,, Iron | | 145 |
| ,, ,, Magnesia | | 205 |
| ,, ,, *Nickel* | | 219 |
| ,, ,, Mercury | | 177 |
| ,, ,, Potash | | 256 |
| ,, ,, *Quinidine* | | 106 |
| ,, ,, Quinine | 1 to 5 grs. | 262 |
| ,, ,, Soda | | 296 |
| ,, ,, Zinc | | 331 |
| *Sulphide of Antimony* | | 48 |
| *Sulpho-carbolic Acid* | | 10 |
| *Sulpho-carbolates* | | 10 |
| ,, ,, *mixtures* | | 10 |
| *Sulphur* | | 306 |
| ,, præcipitatum | 20 to 60 grs. | 306 |
| ,, sublimatum | Stimulant, 10 to 20 grs. Laxative, 20 to 60 grs. | 306 |
| Sulphurated Antimony | | 48 |
| ,, Potash | | 251 |
| *Sulphuret of Antimony, Prepared* | | 48 |
| Sulphuric Acid | | 18 |
| ,, ,, Aromatic | | 19 |
| ,, ,, Diluted | | 19 |
| ,, ,, *Monohydrated* | | 18 |
| ,, *Ether* | | 27 |

| SU to SY | Dose. | Page |
|---|---|---|
| Sulphuris Confectio | 1 to 2 drms. | 307 |
| ,, Iodidi Unguentum | | 308 |
| ,, Iodidum | | 307 |
| ,, *Lac* | | 306 |
| ,, Unguentum | | 307 |
| Sulphurous Acid | ½ to 1 drm. | 19 |
| ,, ,, *Gargle* | | 20 |
| ,, ,, *Lotion* | | 20 |
| ,, ,, *Spray* | | 20 |
| Sumbul Radix | | 308 |
| Sumbul Tinctura | 15 to 30 minims | 308 |
| *Supercarbonas Ammonicus* | | 39 |
| *Suppositoria, not official (group)* | | 345 |
| Suppositoria, official (*group*) | | 308 |
| ,, Acidi Carbolici c. Sapone | contain 1 gr. each | 9 |
| ,, ,, Tannici | contain 3 grs. | 21 |
| ,, ,, ,, c. Sapone | contain 3 grs. | 21 |
| ,, ,, ,, *c. Opio* | | 22 |
| ,, ,, ,, *Vaginal* | | 22 |
| ,, *Belladonnæ* | 1 gr. | 67 |
| ,, *Gallæ* | | 155 |
| ,, *Gummi Rubri* | | 164 |
| ,, Hydrargyri | 5 grs. Ointment | 169 |
| ,, *Krameriæ* | | 191 |
| ,, Morphiæ | ½ gr. | 214 |
| ,, ,, c. Sapone | ¼ gr. | 215 |
| ,, Plumbi comp. | 3 grs. Acet. Lead<br>1 gr. Powdered Opium | 241 |
| ,, *Podophylli* | | 246 |
| *Suppositories, Urethral (group)* | | 346 |
| ,, *Vaginal* ,, | | 346 |
| *Sus Scrofa* | | 25 |
| *Swan's Solution* | | 295 |
| *Sydenham's Laudanum* | | 229 |
| Symbols | | xxxviii |
| *Symphytum* | | 309 |
| *Syrup of Dikinate of Quinia* | | 264 |
| *Syrupi (group)* | | 310 |
| Syrupus | | 273 |
| ,, Aurantii | 1 to 2 drms. | 61 |
| ,, ,, Floris | 1 to 2 drms. | 60 |
| ,, *Calcis Hypophosphitis* | | 80 |
| ,, Chloral | | 101 |
| ,, *Codeiæ* | | 229 |
| ,, *Diacodii* | | 231 |
| ,, Ferri *Bromidi* | | 138 |
| ,, ,, Iodidi | 20 to 60 minims | 142 |
| ,, ,, Phosphatis | 1 to 4 drms. | 147 |
| ,, ,, ,, *comp., Parrish* | | 148 |
| ,, ,, ,, *c. Manganesio* | | 148 |

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|---|---|---|
| Syrupus *Ferri Phosphatis c. Quiniâ et Strychniâ, Easton's* | | 148 |
| ,, *Gummi Rubri* | | 164 |
| ,, Hemidesmi | 1 to 4 drms. | 166 |
| ,, *Ipecacuanhæ* | | 186 |
| ,, Limonis | 1 to 2 drms. | 195 |
| ,, Mori | 1 to 2 drms. | 212 |
| ,, *Morphiæ* | | 229 |
| ,, Papaveris | 1 drm. | 231 |
| ,, ,, *Rhœados* | | 268 |
| ,, *Pruni Virginianæ* | | 258 |
| ,, *Quiniæ Dikinatis* | | 264 |
| ,, ,, *Hydriodatis* | | 264 |
| ,, Rhamni | 1 drm. | 265 |
| ,, Rhei | 1 to 4 drms. | 267 |
| ,, ,, *Aromat.* | | 267 |
| ,, ,, *Comp.* | | 267 |
| ,, Rhœados | 1 to 2 drms. | 268 |
| ,, Rosæ | 1 to 2 drms. | 270 |
| ,, *Rutæ* | | 272 |
| ,, Scillæ | ½ to 1 drm. | 282 |
| ,, *Senegæ* | | 283 |
| ,, Sennæ | 1 to 2 drms. | 285 |
| ,, Tolutanus | 1 to 2 drms. | 62 |
| ,, *Trifolii* | | 320 |
| ,, Zingiberis | 1 to 4 drms. | 332 |
| *Tabacum* | | 311 |
| Tabaci Enema | | 312 |
| ,, Folia | | 311 |
| *Table of Alcohol in Wines* | | 302 |
| ,, ,, *Materia Medica* | | xxviii—xxxvii |
| Tamarindus | ¼ oz. | 312 |
| ,, *Indica* | | 312 |
| Tannic Acid | | 20 |
| ,, ,, Glycerine of | | 21 |
| ,, ,, Lozenges | | 21 |
| ,, ,, *Pessary* | | 22 |
| ,, ,, Suppositories | | 21 |
| ,, ,, ,, *with Opium* | | 22 |
| ,, ,, ,, with soap | | 21 |
| *Tapeworm Remedy* | | 161 |
| Tar | | 239 |
| ,, *Capsules* | | 240 |
| ,, Ointment | | 239 |
| ,, *Pills* | | 240 |
| ,, *Water* | | 239 |
| Taraxaci Decoctum | 2 to 4 oz. | 313 |
| ,, Extractum | 5 to 15 grs. | 313 |
| ,, Radix | | 312 |
| ,, Succus | 2 to 4 drms. | 313 |

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| TA to TI | Dose. | Page |
|---|---|---|
| *Taraxacum Dens-Leonis* | | 312 |
| *Tartar Emetic* | | 49 |
| Tartarated Antimony | | 49 |
| ,, Iron | | 151 |
| ,, Soda | | 290 |
| Tartaric Acid | | 22 |
| *Tartarus Boraxatus* | | 258 |
| ,, *Ferratus* | | 151 |
| ,, *Natronatus* | | 290 |
| ,, *Stibiatus* | | 50 |
| *Tartras Stibico-Kalicus* | | 50 |
| ,, *Ferrico-Potassicus* | | 151 |
| ,, *Natrico-Kalicus* | | 290 |
| *Tartrate of Antimony and Potash* | | 50 |
| ,, ,, Potash | | 257 |
| ,, ,, *Soda and Potash* | | 290 |
| ,, *Acide de Potasse* | | 257 |
| ,, *Neutre de Potasse* | | 257 |
| ,, *de Potasse et d'Antimoine* | | 50 |
| *Teinture de Noix Vomique* | | 221 |
| ,, *de Quinquina* | | 108 |
| ,, *de Raifort Comp.* | | 56 |
| ,, *Raphani Comp.* | | 56 |
| *Terchloride of Formyl* | | 103 |
| Terebinthina Canadensis | | 313 |
| Terebinthinæ *Ætheroleum* | | 314 |
| ,, Confectio | 1 to 4 drms. | 314 |
| ,, Enema | | 314 |
| ,, Linimentum | | 314 |
| ,, ,, Aceticum | | 315 |
| ,, Oleum | 10 to 30 minims | 314 |
| ,, Unguentum | | 315 |
| *Testing, Articles employed in* | | 334 |
| ,, *Solutions for* | | 336 |
| ,, *Volumetric* | | 339 |
| *Tetrachloride of Carbon* | | 104 |
| *Thebaica* | | 224 |
| ,, *Tinctura* | | 229 |
| *Theine* | | 74 |
| Theobromæ *Cacao* | | 315 |
| ,, Oleum | | 315 |
| Theriaca | | 315 |
| *Thermometric Scales compared* | | xxv |
| *Thus* | | 238 |
| ,, Americanum | | 239, 316 |
| *Thymol* | | 316 |
| *Tincturæ (group)* | | 317 |
| Tinctura Aconiti | 5 to 15 minims | 24 |
| ,, *Actææ Racemosæ* | | 25 |
| ,, Aloes | 1 to 2 drms. | 32 |

**Official Names in Roman; all others in Italics.**

| TI | Dose. | Page |
|---|---|---|
| Tinctura *Ammon. composita* | | 41 |
| ,, Arnicæ | 1 to 2 drms. | 57 |
| ,, Assafœtidæ | ½ to 1 drm. | 58 |
| ,, Aurantii | 1 to 2 drms. | 61 |
| ,, ,, Recentis | 1 to 2 drms. | 61 |
| ,, Belladonnæ | 5 to 20 minims | 66 |
| ,, *Benzoini* | | 67 |
| ,, ,, composita | ½ to 1 drm. | 67 |
| ,, *Boldo* | | 71 |
| ,, Buchu | 1 to 4 drms. | 73 |
| ,, *Cachou* | | 95 |
| ,, Calumbæ | ½ to 2 drms. | 81 |
| ,, Camphoræ composita | 15 to 60 minims | 84 |
| ,, Cannabis Indicæ | 5 to 20 minims | 86 |
| ,, Cantharidis | 5 to 20 minims | 87 |
| ,, Capsici | 10 to 20 minims | 88 |
| ,, ,, *Conc.* (*Turnbull*) | | 89 |
| ,, Cardamomi composita | ½ to 2 drms. | 91 |
| ,, ,, *Simplex* | | 91 |
| ,, Cascarillæ | ½ to 2 drms. | 93 |
| ,, Castorei | ½ to 1 drm. | 94 |
| ,, Catechu | ½ to 2 drms. | 95 |
| ,, *Chinæ* | | 108 |
| ,, ,, *Comp.* | | 108 |
| ,, ,, *Flav.'* | | 108 |
| ,, ,, *Simplex* | | 108 |
| ,, Chiratæ | ½ to 2 drms. 15 to 60 minims | 100 |
| ,, Chloroformi composita | 20 to 60 minims | 104 |
| ,, *Cicutæ. See* Tinctura Conii | | 117 |
| ,, Cinchonæ | ½ to 2 drms. | 107 |
| ,, ,, composita | ½ to 2 drms. | 108 |
| ,, ,, *Huxham's* | | 108 |
| ,, Cinnamomi | ½ to 2 drms. | 110 |
| ,, Cocci | 30 to 90 minims | 111 |
| ,, Colchici *composita* | | 113 |
| ,, ,, *Florum* | | 113 |
| ,, ,, Seminum | 10 to 30 minims | 112 |
| ,, *Colocynthidis* | | 115 |
| ,, *Colombo* | | 81 |
| ,, Conii | ½ to 1 drm. | 117 |
| ,, Croci | ½ to 2 drms. | 122 |
| ,, Cubebæ | 1 to 2 drms. | 123 |
| ,, Digitalis | 10 to 30 minims | 128 |
| ,, *Diosmæ* | | 73 |
| ,, Ergotæ | 15 to 60 minims | 133 |
| ,, Ferri Acetatis | 5 to 30 minims | 137 |
| ,, ,, ,, *Æther.* | | 137 |
| ,, ,, *Ammonio-Chloridi* | | 145 |
| ,, ,, *Chlorati* | 10 to 30 minims | 144 |
| ,, ,, *Chloridi* | | |

**Official Names in Roman; all others in Italics.**

| TI | Dose. | Page |
|---|---|---|
| Tinctura Ferri *Muriatis* | 10 to 30 minims | 144 |
| ,, ,, Perchloridi | | |
| ,, ,, *Sesquichloridi* | | |
| ,, Gallæ | ½ to 2 drms. | 154 |
| ,, *Gelsemii* | | 155 |
| ,, *Gentianæ* | | 157 |
| ,, ,, composita | 1 to 2 drms. | 156 |
| ,, *Gossypii Radicis* | | 160 |
| ,, *Guaiaci* | | 163 |
| ,, ,, Ammoniata | ½ to 1 drm. | 162 |
| ,, *Guaranæ* | | 163 |
| ,, *Gummi Rubri* | | 164 |
| ,, *Hamamelis* | | 166 |
| ,, *Hellebori Nigri* | | 166 |
| ,, Hyoscyami | 15 to 60 minims | 179 |
| ,, ,, *Radicis* | | 179 |
| ,, ,, *Recentis* | | 179 |
| ,, Iodi | 5 to 20 minims | 184 |
| ,, ,, *Decolorata* | | 184 |
| ,, *Ipecacuanhæ* | | 187 |
| ,, *Jaborandi* | | 187 |
| ,, Jalapæ | ½ to 2 drms. | 188 |
| ,, ,, *Resinæ* | | 188 |
| ,, *Kamalæ* | | 189 |
| ,, Kino | ½ to 2 drms. | 190 |
| ,, Krameriæ | 1 to 2 drms. | 191 |
| ,, *Lactucarii* | | 192 |
| ,, Laricis | 20 to 25 minims | 192 |
| ,, Lavandulæ composita | ½ to 2 drms. | 194 |
| ,, ,, *Rubr.* | | 194 |
| ,, Limonis | ½ to 2 drms. | 195 |
| ,, Lobeliæ | 10 to 30 minims | 200 |
| ,, ,, Ætherea | 10 to 30 minims | 201 |
| ,, Lupuli | ½ to 2 drms. | 201 |
| ,, ,, *Vinosa* | | 202 |
| ,, *Lupulinæ* | | 202 |
| ,, *Lyttæ. See* Canthar. | | 86 |
| ,, *Maticæ* | | 208 |
| ,, *Moschi* | | 217 |
| ,, Myrrhæ | ½ to 1 drm. | 219 |
| ,, ,, *et Boracis* | | 72 |
| ,, Nucis Vomicæ | 10 to 30 minims | 220 |
| ,, Opii | 5 to 30 minims | 227 |
| ,, ,, Ammoniata | ½ to 1 drm. | 227 |
| ,, ,, *Benzoica* | | 84 |
| ,, ,, *Crocata* | | 228 |
| ,, *Physalis Alkakengi* | | 235 |
| ,, *Physostigmatis* | | 236 |
| ,, *Piper. Hispan.* | | 89 |

**Official Names in Roman; all others in Italics.**

| TI to TR | Dose. | Page |
|---|---|---|
| Tinctura *Podophylli* | | 246 |
| ,, Pyrethri | | 260 |
| ,, Quassiæ | 1 to 2 drms. | 261 |
| ,, *Quillayæ Saponariæ* | | 262 |
| ,, Quiniæ | 1 to 1½ drms. | 263 |
| ,, ,, Ammoniata | 1 to 2 drms. | 263 |
| ,, Rhei | Stom. 1 to 2 drms. Purgative, ½ to 1 oz. | 267 |
| ,, ,, *Vinosa* | | 267 |
| ,, Sabinæ | 15 to 30 minims | 272 |
| ,, *Saponariæ* | | 262 |
| ,, Scillæ | 15 to 30 minims | 282 |
| ,, Senegæ | ½ to 2 drms. | 283 |
| ,, Sennæ | 2 to 8 drms. | 285 |
| ,, Serpentariæ | ½ to 2 drms. | 286 |
| ,, Stramonii | 10 to 20 minims | 303 |
| ,, *Strychni* | | 222 |
| ,, ,, *Ether* | | 222 |
| ,, *Succini* | | 306 |
| ,, Sumbul | 15 to 30 minims | 308 |
| ,, *Thebaicæ* | | 229 |
| ,, Tolutana | 15 to 30 minims | 63 |
| ,, Valerianæ | 1 to 2 drms. | 323 |
| ,, ,, Ammoniata | ½ to 1 drm. | 323 |
| ,, ,, *Ætherea* | | 324 |
| ,, Veratri Viridis | 5 to 20 minims | 325 |
| ,, *Warburghii* | | 264 |
| ,, Zingiberis | 10 to 30 minims | 332 |
| ,, ,, fortior | 5 to 20 minims | 333 |
| *Tinnivelly Senna* | | 284 |
| *Tisane d'Orge* | | 167 |
| ,, *de Polygala* | | 283 |
| ,, *de Ratanhie* | | 191 |
| ,, *de Valeriane* | | 323 |
| Tobacco Leaf | | 311 |
| Tolu Balsam | | 62 |
| Tragacantha | 20 grs. | 319 |
| Tragacanthæ Mucilago | 1 oz. | 319 |
| ,, Pulv. comp. | 10 to 60 grs. | 320 |
| *Traumatic Balsam* | | 67 |
| Treacle | | 315 |
| *Trifolii Syrupus* | | 320 |
| *Tritici Repentis Decoctum* | | 320 |
| *Triticum Vulgare* | | 136 |
| *Trochisci (group)* | | 320 |
| ,, Acidi Tannici | ½ gr. in each 1 to 6 lozenges | 21 |
| ,, *Aconiti* | | 24 |
| ,, *Ammonii Bromidi* | | 35 |
| ,, ,, *Chloridi* | | 36 |
| ,, Bismuthi | 2 grs. in each 1 to 6 lozenges | 70 |
| ,, Catechu | 1 gr. in each 1 to 6 lozenges | 95 |

**Official Names in Roman; all others in Italics.**

TR to UN — Dose. — Page

Trochisci Ferri Redacti . 1 gr. in each 1 to 6 lozenges . . . . . . 150
,, *Gummi Rubri* . . . . . . 164
,, Ipecacuanhæ . . ¼ gr. in each 1 to 3 lozenges . . . . . . 186
,, ,, et Morphiæ . . . . . . 186
,, *Krameriæ* . . . . . . 191
,, Morphiæ . . . $\frac{1}{36}$ gr. in each 1 to 2 lozenges . . . . . . 215
,, ,, et Ipecac. . . . . . . 1 to 2 lozenges . . . . . . 215
,, Opii . . . . . . $\frac{1}{10}$ gr. Ext. 1 to 2 lozenges . . . . . . 227
,, Potassæ Chloratis 5 grs. in each 1 to 6 lozenges . . . . . . 254
,, *Santonini* . . . . . . 276
,, Sodæ Bicarb. . 5 grs. in each 1 to 6 lozenges . . . . . . 292
*Turnbull's concentrated Tincture of Capsicum* . . . . . . 89
Turpentine Oil . . . . . . 314
*Turpeth Mineral* . . . . . . 177
Ulmi Cortex . . . . . . 321
,, Decoctum . . . . . . 2 to 4 oz. . . . . . . 321
*Ulmus Campestris* . . . . . . 321
,, *Fulva* . . . . . . 321
*Uncaria Gambir* . . . . . . 95
*Unguenta (group)* . . . . . . 321
Unguentum *Acidi Boracici* . . . . . . 7
,, ,, *Carbolici* . . . . . . 9
,, ,, *Chrysophanici* . . . . . . 10
,, ,, *Pyrogallici* . . . . . . 17, 18
,, ,, *Tannici* . . . . . . 22
,, ,, *Tannici c. Opio* . . . . . . 22
,, Aconitiæ . . . . . . 24
,, *Ammonii Iodidi* . . . . . . 37
,, *Antimonii* . . . . . . 50
,, ,, Tartarati . . . . . . 50
,, *Ararobæ* . . . . . . 53
,, Atropiæ . . . . . . 59
,, *Autenriethi* . . . . . . 50
,, *Balsami Peruviani* . . . . . . 62
,, ,, ,, *Resinosum* . . . . . . 62
,, *Basilicum* . . . . . . 265, 315
,, Belladonnæ . . . . . . 66
,, *Benzoini* . . . . . . 26
,, *Bismuthi* . . . . . . 70
,, *Boracis* . . . . . . 72
,, Cadmii Iodidi . . . . . . 74
,, *Calomelanos*, now Hydr. Subchloridi . . . . . . 175
,, *Camphoræ* . . . . . . 84
,, Cantharidis . . . . . . 87
,, ,, *Album* . . . . . . 88
,, ,, *Nigrum* . . . . . . 88
,, ,, *Simplex* . . . . . . 88
,, ,, *Viride* . . . . . . 88
,, *Ceræ* . . . . . . 96
,, *Cereum* . . . . . . 96

**Official Names in Roman; all others in Italics.**

UN Dose. Page
Unguentum Cetacei . . . . . 98
,, *Chloroformi* . . . . . 104
,, *Citrinum. See* Ung. Hydr. Nitr. . . . . . 171
,, Creasoti . . . . . 120
,, *Cretæ* . . . . . 122
,, *Diachylon Hebræ* . . . . . 244
,, Elemi . . . . . 130
,, *Galbani Comp.* . . . . . 154
,, Gallæ . . . . . 155
,, ,, c. Opio . . . . . 155
,, *Glycerini* . . . . . 44
,, *Goa powder* . . . . . 53
,, Hydrargyri . . . . . 169
,, ,, *c. Ammoniæ Muriate* . . . . . 169
,, ,, Ammoniati . . . . . 177
,, ,, *Cinereum* . . . . . 169
,, ,, compositum . . . . . 169
,, ,, Iodidi Rubri . . . . . 170
,, ,, ,, *Viridis* . . . . . 171
,, ,, Nitratis . . . . . 171
,, ,, Oxidi Flav. . . . . . 173
,, ,, ,, Rubri . . . . . 174
,, ,, *Perchloridi* . . . . . 175
,, ,, *Præcipitati Albi* . . . . . 177
,, ,, Subchloridi . . . . . 176
,, *Hydrato-carb. Plumbi* . . . . . 242
,, Iodi . . . . . 184
,, ,, *Comp.* . . . . . 184
,, *Kreasoti* . . . . . 120
,, *Mezerei* . . . . . 211
,, *Odoratum vel Odoriferus* . . . . . 26
,, *Opii* . . . . . 228
,, *Oxygenatum* . . . . . 26
,, *Petrolei* . . . . . 324
,, Picis Liquidæ . . . . . 239
,, *Plumbi* . . . . . 245
,, ,, Acetatis . . . . . 241
,, ,, Carbonatis . . . . . 242
,, ,, Iodidi . . . . . 242
,, ,, Subacetatis compos. . . . . . 245
,, Potassæ Sulphuratæ . . . . . 251
,, Potassii Iodidi . . . . . 249
,, *Præcipitati Albi. See* Ung. Hydrarg. Ammon. . . . . . 177
,, Resinæ . . . . . 264
,, Sabinæ . . . . . 273
,, *Sambuci* . . . . . 275
,, ,, *Viride* . . . . . 275
,, Simplex . . . . . 96
,, *Sinapinum* . . . . . 287
,, *Stimulans* . . . . . 88

| UN to VI | Dose. | Page |
|---|---|---|
| Unguentum *Stibio-Kali Tartarici* | | 50 |
| ,, *Stramonii* | | 303 |
| ,, Sulphuris | | 307 |
| ,, ,, Iodidi | | 308 |
| ,, *Tartari Stibiati* | | 50 |
| ,, Terebinthinæ | | 315 |
| ,, Veratriæ | | 325 |
| ,, Zinci | | 330 |
| *Urethral Suppositories* | | 346 |
| *Urginea Scilla* | | 281 |
| Uvæ | | 323 |
| ,, Ursi *Decoctum* | | 322 |
| ,, ,, Folia | 10 to 30 grs. | 322 |
| ,, ,, Infusum | 1 to 2 oz. | 322 |
| *Vaginal Suppositories.* See *Pessaries* | | 346 |
| *Valangin's Solution* | | 6 |
| *Valeriana officinalis* | | 323 |
| Valerianæ Infusum | 1 to 2 oz. | 323 |
| ,, Radix | 10 to 30 grs. powder | 323 |
| ,, Tinctura | 1 to 2 drms. | 323 |
| ,, ,, Ammoniata | ½ to 1 drm. | 323 |
| ,, ,, *Ætherea* | | 324 |
| Valerianate of Soda | | 297 |
| ,, Zinc | | 331 |
| Vapor *Acidi Carbolici* | | 8 |
| ,, Acidi Hydrocyanici | | 14 |
| ,, *Amyl Nitris* | | 44 |
| ,, Chlori | | 77 |
| ,, *Chloroformi* | | 184 |
| ,, Coniæ | | 116 |
| ,, Creasoti | | 120 |
| ,, Iodi | | 184 |
| ,, ,, *c. Conio* | | 184 |
| ,, *Pini Sylvestris* | | 238 |
| *Vapores (group)* | | 324 |
| *Vaselinum* | | 324 |
| ,, *Hydrargyri nitratis* | | 172 |
| ,, *Plumbi subacetatis* | | 245 |
| Veratria | | 325 |
| Veratriæ Unguentum | | 325 |
| Veratri Viridis Radix | 4 to 6 grs. | 325 |
| ,, ,, Tinctura | 5 to 20 minims | 325 |
| *Veratrum Viride* | | 325 |
| *Vienna Paste* | | 250 |
| *Vin Emétique* | | 50 |
| *Vina (group)* | | 326 |
| *Vinaigre Anglaise* | | 4 |
| ,, *des Quatre Voleurs* | | 4 |
| ,, *Radical* | | 4 |
| *Vinca Major* | | 327 |

**Official Names in Roman; all others in Italics.**

| VI to WH | Dose. | Page |
|---|---|---|
| *Vinceæ Majoris Extract. Liquid.* | | 327 |
| ,, ,, *Infusum* | | 327 |
| Vinegar, *Aromatic* | | 4 |
| ,, British | 1 to 2 drms. | 2 |
| ,, *Camphorated* | | 84 |
| ,, distilled | | 3 |
| ,, *of Four Thieves* | | 4 |
| Vinum Aloes | 1 to 2 drms. | 32 |
| ,, Antimoniale | 5 to 30 minims | 50 |
| ,, *Antimoniatum* | | 50 |
| ,, *Antimonii* | | 50 |
| ,, Aurantii | | 61 |
| ,, *Chinæ* | | 108 |
| ,, Colchici | 10 to 30 minims | 112 |
| ,, ,, *Seminum* | | 113 |
| ,, Ferri | 1 to 4 drms. | 151 |
| ,, ,, Citratis | 1 to 4 drms. | 140 |
| ,, Ipecacuanhæ. | Expectorant, 5 to 40 minims. Emetic, 3 to 6 drms. | 186 |
| ,, Opii | 10 to 40 minims | 227 |
| ,, Quiniæ | ½ to 1 oz. | 263 |
| ,, Rhei | 1 to 2 drms. | 267 |
| ,, *Seminum Colchici* | | 113 |
| ,, *Stibiatum* | | 50 |
| ,, *Stibiato-Tartaricum* | | 50 |
| ,, *Stibio-Kali Tartarici* | | 50 |
| ,, Xericum | | 326 |
| *Virginian Tobacco* | | 311 |
| *Vitis Vinifera* | | 323 |
| *Vitriol, Elixir of* | | 19 |
| ,, ,, *Mynsicht's* | | 19 |
| ,, *Oil of* | | 18 |
| *Von Brun's Cotton Wool* | | 160 |
| *Warburg's Tincture* | | 264 |
| *Wash for Strengthening the Hair* | | 88 |
| *Water Barometer* | | 51 |
| *Waters, distilled (group)* | | 52 |
| ,, *Mineral* | | 348 |
| ,, ,, *(classified list)* | | 386 |
| ,, ,, *a list of those sold in bottles* | | 383 |
| Wax, White | | 96 |
| ,, Yellow | | 97 |
| Weights and Measures of the British Pharmacopœia | | xxi |
| ,, ,, ,, ,, *compared with foreign pharmacopœias* | | xxiii |
| ,, Metrical | | xxiv |
| ,, *Troy and Avoirdupois compared* | | xxii |
| Wheat Starch | | 44 |
| Wheaten Flour | | 136 |
| *Whey Alum* | | 34 |
| *White Arsenic* | | 5 |
| ,, *Bismuth* | | 69 |

**Official Names in Roman; all others in Italics.**

| WH to ZI | Dose. | Page |
|---|---|---|
| White Canella Bark | | 84 |
| ,, Marble | | 207 |
| ,, *precipitate of Mercury* | | 177 |
| ,, Turkey Gum Acacia | | 1 |
| ,, Wax | | 96 |
| *Whooping Cough Mixture* | | 111 |
| *Wild Cherry Bark* | | 258 |
| *Wines (group)* | | 326 |
| *Winter Cherry* | | 235 |
| *Whiskey* | | 300 |
| *Witch Hazel* | | 166 |
| Wood Charcoal | | 90 |
| ,, *Oil* | | 61 |
| Woorara | | 125 |
| Yeast, beer | | 97 |
| Yellow Cinchona Bark | | 108 |
| ,, Oxide of Mercury | | 173 |
| ,, *Prussiate of Potash* | | 256 |
| ,, Wax | | 106 |
| Yolk of Egg | | 229 |
| *Zincum* | | 327 |
| ,, *(group)* | | 327 |
| ,, *Chloratum* | | 329 |
| ,, Granulatum | | 327 |
| ,, *Sulphuricum* | | 331 |
| Zinci Acetas | 1 to 2 grs. | 328 |
| ,, *Acetatis Lotio* | | 328 |
| ,, *Bromidum* | | 328 |
| ,, Carbonas | 2 to 10 grs. | 328 |
| ,, Chloridum | ½ to 1 gr. | 329 |
| ,, Chloridi Liquor | | 329 |
| ,, ,, *Points* | | 330 |
| ,, *Oleas* | | 330 |
| ,, Oxidum | 2 to 10 grs. | 330 |
| ,, Sulphas | Tonic, 1 to 2 grs. Emetic, 10 to 30 grs. | 331 |
| ,, *Sulphocarbolas* | | 10 |
| ,, Unguentum | | 330 |
| ,, Valerianas | 1 to 6 grs. | 331 |
| Zingiber | 10 to 20 grs. | 332 |
| ,, *officinale* | | 332 |
| Zingiberis *Essentia* | | 333 |
| ,, *Rhizoma* | | 332 |
| ,, Syrupus | 1 to 4 drms. | 332 |
| ,, Tinctura | 10 to 30 minims | 332 |
| ,, ,, fortior | 5 to 20 minims | 333 |
| ,, *Oleoresina* | | 333 |

# SECTION A.

## THERAPEUTICAL CLASSIFICATION OF REMEDIES.

COMPILED FROM VARIOUS AUTHORS, THE ARRANGEMENT BEING TAKEN FROM THE DICTIONARY OF MATERIA MEDICA, BY DR. WAHLTUCH.

### AGENTS OF DEFINITE OPERATION.

**Alteratives.**—Medicines which gradually change and correct a morbid condition of the organs. They are given in moderate doses.

Those of *Antimony* are, Antimonii Oxidum, A. Sulphuratum.

*Arsenic*—Liquor Arsenicalis, Liquor Sodæ Arseniatis, Liquor Arsenici Hydrochloricus.

*Chlorine*—Acidum Nitrohydrochloricum Dil., Ammon. Chloridum, Calcii, Chlori Liquor, Potassæ Chloras, Liquor Sodæ Chloratæ, Zinci Chloridum.

*Iodine*—Iodum, Ferri Iodidum, Potassii Iodidum, Sulphur Iodidum.

*Mercury*—Hydrarg. c. Cretâ, Pilula Hydrarg., Hydrarg. Subchloridum, Hydrarg. Iodidum.

*Sulphur*—Sulphur Sublimatum, Sulphur Præcipitatum.

*Vegetable*—Dulcamara, Guaiacum, Mezereum, Sarsaparilla, Taraxacum.

*Eclectics*—Corydalin, syphilitic; Iridin, renal; Leptandrin, hepatic; Phytolaccin, scorbutic; Podophyllin, Rumicin, Sanguinarin.

*Mineral Waters*—Adelheidsquelle, Carlsbad, Ems, Friedrichshall.

**Anæsthetics.**—Substances which, when inhaled in vapour, have the property of suspending consciousness, and at the same time causing insensibility to pain: Æther, Chloroform, Carbon Tetrachloride, Bichloride of Methylene, Nitrite of Amyl, Nitrous Oxide Gas.

**Anodynes.**—Medicines which act upon the brain, alleviating pain: Aconitum, Amyl Nitris, Atropia, Belladonna, Camphor, Cannabis Indica, Conium, Gelsemin, Lupulus, Hyoscyamus, Morphia, Opium, Spiritus Ætheris, Stramonium.

**Antacids.**—Agents which correct acidity, and render the blood and secretions more fluid; useful in Gout, Rheumatism, etc.: Ammonia, Amm. Acet. Liquor, Ammon. Spirit. Aromatic., A. Carbonas, Calcis Aqua, C. Carbonas, C. Saccharatus Liquor, Creta Preparata, Decoct. Aloes Comp., Lithiæ Aq. Efferv., L. Carbonas, L. Citras, Magnesia, M. Carbonas, Potassæ Liquor, P. Bicarbonas, P. Carbonas, Sapo Durus, Sodæ Bicarbonas, S. Liquor, S. Liquor Efferv., Sodæ Carb.

*Mineral Waters*—Contrexville, Ems, Fachingen, Tarasp, Vichy.

**Antalkalines.**—Medicines which neutralize excess of alkaline matter in the alimentary canal and urinary organs: Acid. Benzoic., A. Citric., A. Phosphoric. Dilut., A. Sulphuric. Dilut., Ammon. Benz., Potass. Benz., Sodæ Benz.

**Anti-Anæmics.**—If Anæmia be present the salts of iron should be given; if wasting of the body, Cod Liver Oil would be beneficial: Ferri Ammon. Citr., F. Carbon. Saccharata, F. Phosph. Co. Syr. (Parrish), Ferrum Redactum, Easton's Syrup, Liq. Ferri Dialysatus, Tinct. Ferri Perchlor.

*Mineral Waters*—Borka, Franzensbad, Mondorf, Rippoldsau, St. Moritz, Spa.

**Antemetics.**—Medicines which arrest vomiting arising from disease or sea-sickness: Acid. Hydrocyanic. Dil., Acid. Phosph. Dil., Belladonna, Bismuth, Calcii Chlorid., Calcis Liq., Caryoph. Infus., Cerii Oxalas, Chloral, Chloroform, Creasotum, Magnesia.

**Anthelmintics or Vermifuges.**—Medicines which destroy worms.

*Ascarides or Thread Worms*—Acid. Carbolic., Areca, Calcis Liquor, Enema Aloes, Enema Sodii Chloridi, Mucuna, Ol. Olivæ, Santoninum, Scammonium.

*Round Worm*—Calomel, Calcis Liquor, Jalap, Mucuna Pruriens, Sabina.

*Tape Worm*—Areca, Cambogia, Cusso, Filicis Oleum, Granati Cort. Rad. Dec., Kamala, Santoninum, Tereb. Conf. et Oleum.

**Anthidrotics.**—Medicines which check perspiration: Acid. Acetic., A. Sulphuric. Dilut., A. Tannic., Ferri Sulphas, Ferri Mist. Comp., Hæmatoxyli Decoct., Zinci Oxydum.

**Antidotes** are placed under the several powerful drugs.

**Antilithics.**—Medicines which counteract a tendency to the formation of Calculi, or deposition of urinary sediments: Acid. Nitric. Dil., Acid. Phosph. Dilut., Lithiæ Liq. Efferv., L. Carbon., L. Citras, Magnes. Liq. Efferv., Pareiræ Rad., Potas. Bicarb., Potassæ Carb., Potassæ Liq. Efferv., Potassæ Liquor, Sapo, Sodæ Carb., Sodæ Liq. Efferv., Sodæ Citro-tart. Efferv.

*Mineral Waters*—Mergentheim, Neuenahr, Selters, Tchitli, Vals, Vichy, Wildungen.

**Antiparasitics.**—Medicines which destroy vegetable and animal parasites: Acid. Sulphurosum, Hydr. Ammoniatum, Olea Expressa et Essent., Pyrethrum Roseum, Quassia, Sulphur, Tabacum.

**Antiperiodics.**—Medicines which have the property of interrupting periodical attacks of disease: Arsenicalis Liquor, Beberiæ Sulph., Chloroform, Cinchonæ Extr. Liquid., Nectandræ Cort., Quiniæ Dikin. Syrup., Sodii Chloridum.

**Antiseptics.**—Agents which prevent the decomposition of organic structures, and destroy infection and fœtid odours: Acidum Boracic., Acid. Carbolicum, A. Chromicum, A. Hydrochloricum, A. Nitric., A. Salicylic., A. Sulphurosum, Calx Chlorata, Chlori Liquor, Carbo Ligni, Cerevisiæ Ferment., Creasotum, Glycerinum, Potassa Sulphurata, Potass. Permanganas, Sodæ Chloratæ Liquor, Sodii Chloridum, Thymol, Zinci Chloridum.

**Antispasmodics.**—Medicines which allay irregular and inordinate muscular contraction, and prevent the recurrence of spasms: Acid. Hydrocyanici Dil., Æther, Ammonia, A. Carbonas, A. Spiritus Aromaticus, Ammoniacum, Argenti Nitras, Assafœtida, Belladonna, Cajuput. Ol., Calendula, Camphor, Cannabis Indica, Castoreum, Chloral-Hydrate, Chloroformum, Conium, Galbanum, Hyoscyamus, Lobelia, Moschus, Menth. Pip. Ol., Pil. Aloes et Assafœtidæ, Ruta, Spir. Ammon. Fœtid. Stramonium, Sumbul, Terebinthina, Valeriana and Valerianates, Zinci Oxydum, Zinci Valerianas.

**Aperients.**—*See* Cathartics.

**Aphrodisiac.**—Belladonna, Tinct. Ferri Perchlor., Phosphorus.

**Aromatics.**—Substances having an agreeable taste and smell, and having the property of dispelling flatus and correcting the griping from acrid medicines: Anisum, Anthemis, Aqua Anethi, A. Carui, A. Cinnamom., A. Caryophyll., A. Cardam., A. Cascarillæ, A. Coriand., A. Fœniculi, A. Menth. Pip., A. Menth. Vir., A. Pimentæ, Myristicæ Sp., Zingiber.

**Astringents.**—Medicines which produce contraction of the tissues and coagulation of the albuminous fluids; they are given to improve digestion and check increased secretions, mucous discharges, and hemorrhages; or applied topically to obviate relaxation and to stop bleeding.

*Mineral Substances* are, all the Diluted Mineral Acids, and all the Salts of the Metals; Alum, Borax, Carbolic Acid, Creasotum.

*Vegetable Substances.*—Acetum, Acid. Acetic. Dil., A. Gallic., A.

Tannic., Bela, Catechu, Cinnamon, Cornin, Ergota, Filix Mas, Galla, Geranin, Granati Rad. Cort., Gummi Rubr., Hæmatoxylum, Krameria, Kino, Larix, Matico, Quercus, Rheum, Rosa, Rumicin, Symphytum, Terebinthina, Ulmus, Uva Ursi, Vinca Major.

**Carminatives.**—Cardamom, Carui, Caryoph., Cinnamon, Coriander, Fœniculum, Juniper, Lavand., Limon. Ol., Menth. Pip. Ol., Myristica, Piper, Zingiber.

**Cathartics.**—Medicines which promote alvine evacuations.

*Mild or Laxative.*—Belladonna, Cassiæ Pulpa, Euonymin, Elaterii Pulv. Comp., Fel. Bovinum, Ficus, Glycyrrh. Pulv. Comp., Ipecac., Magnesia, M. Carbonas, Manna, Mel, Mori Succus, Nux Vomica, Olivæ Oleum, Potassæ Citras, Potassæ Sulphas, P. Tartras, P. Tart. Acida, Prunum, Rhamnus Frangula, Ricini Oleum, Sapo, Sinapis Semen, Sodæ Phosphas, S. Sulphas, S. Tartarata, Sulphur, Sulphur Præcip., Tamarindus, Taraxacum.

*Actively Aperient.*—Aloes Barb., A. Socotr., Baptisin, Colchicum, Helleborus Niger, Iridin, Jalapa, Jalapinum, Magnes. Sulphas, Leptandrin, Podophyllin, Rheum, Senna, Sodæ Sulphas.

*Drastic or Hydragogue.*—Cambogia, Colocynthis, Crotonis Oleum, Elaterium, Hydrarg. Subchlor., Rhamni Syrupus, Scammonium.

*Mineral Waters.*—Achselmannstein, Birmenstorff, Carlsbad, Friedrichshall, Homburg, Hunyadi Janos, Kissingen, Marienbad, Pullna, Royal Hungarian Bitter Water (Buda-Pesth), Seidlitz.

**Caustics.**—Substances which destroy the vitality of the parts they are applied to: Acid. Acetic. Glaciale, A. Arseniosum, A. Carbolicum, A. Chromicum, A. Nitricum, A. Sulphurici Pasta, Alum. Siccatum, Antim. Chlor., Argenti Nitras, Calx, Creasotum, Cupri Sulphas, Hydr. Iod. Rubr., Hyd. Ox. Rubr., H. Perchloridum, Hydr. Nitrat. Acidus Liquor, Iodi Lin., Potassa c. Calce, Potassæ Permang., Soda Caustica, Zinci Chloridum.

**Cholagogues.**—Agents which cause a flow of bile into the intestines: Ammonii Chloridum, Hydrargyr. Subchlor.(?), H. Perchlorid., Podophyllin.

*Mineral Waters.*—Ems, Friedrichshall, Hungarian, Hunyadi Janos, Kissingen.

**Demulcents.**—Gum Acacia, Amygdala Dulc., Amylum, Cetaceum, Cetraria, Cydonii Semen, Ficus, Glycerinum, Glycyrrhiza, Hordeum, Lini Semen, Mel, Morrhuæ Oleum, Oleum Olivæ, Sevum, Theriaca, Tragacantha, Triticum Repens, Ulmi Cortex, Uvæ.

**Deodorizers.**—*See* Antiseptics.

**Desiccants.**—Agents which check secretion, and dry up mucous discharges from ulcers and wounds: Calcis Carbonas, Calcis Hydras, Creta Præparata, Magnesiæ Carbonas, Plumbi Acetas, P. Carbonas, Zinci Oxydum.

**Diaphoretics.**—Medicines which increase the exhalation of the skin and produce sweating. Employed in fresh colds, in fevers, dropsy, and some skin diseases: Ammoniæ Acetatis Liquor, Ammon. Carbonas, Ammon. Chlorid., Ammon. Phosphas, Antimonialis Pulvis, Antimon. Tartarati Vin., Antim. Sulphur., Belladonna, Buchu, Cajuputi Sp., Calendula, Colchici Vin., Camphor, Doveri Pulv., Guaiaci Ammon. Tinct., Ipecac. Pulv., Ipecac. Vin., Lactuca, Lobelia, Mudar, Potassæ Citras, Potass. Nitras, Sabina, Sassafras, Simaruba, Serpentaria, Ætheris Nit. Sp., Sulphur, Camphoræ Sp., Terebinth.

**Disinfectants.**—*See* Antiseptics.

**Diuretics.**—Medicines which promote the secretion of urine: Alchemilla, Ammon. Acet. Liq., Ammon. Chlorid., Ammon. Benzoas, Belladonna, Borax, Buchu, Cantharis, Caulophyllin, Colchicum, Copaiba, Copaibæ Resin., Cubeba, Digitalis Inf., Euonymin, Hemidesmi Radix, Iridin, Juniperi Oleum, Lithiæ

Efferv. L., Potassæ Efferv. L., Borax, Pareiræ Decoct., Parietaria, Physalis Alkakengi, Potassæ Acetas, P. Nitras, Potass. Tartras Acida, Potassæ Tartras, Potassæ Bicarb., Potassæ Carb., Potassæ Chloras, Potassæ Liquor, Senegæ Inf., Senecionin, Scoparius, Scillæ Acetum, Simaruba, Spirit. Ætheris Nit., Terebinthina, Ulmi Decoctum.

*Mineral Waters.*—Friedrichshall, Kissingen, Leuk, Shap.

**Ecbolics.**—Substances which promote the contraction of the uterus and facilitate the expulsion of the contents: Borax, Cinnamomum, Ergota, Sabina.

**Emetics.**—Medicines which excite vomiting: Alum (in repeated doses), Anthemis, Antimonium Tartaratum, Apomorphia, Baptisin, Cupri Sulphas, Ipecacuanha, Sinapis Pulvis, Sodii Chloridum, Tabacum, Veratrum Viride, Zinci Acetas, Zinci Sulphas.

**Emmenagogues.**—Medicines which maintain or restore a healthy condition of the menstrual discharge, and increase the quantity: Aloes Decoctum Co., Aloes Pilul. et Myrrh., Ammonii Chloridum, Borax, Calendula, Ergota with Hyoscyamus, Ferrum Redactum, Gossypii Tinctura, Ruta, Sabina, Senecionin.

**Emollients.**—Substances which relax the solid tissues; also such as protect sensitive surfaces, employed to allay irritation, painful ulceration in diseases of the mucous membranes of the alimentary canal: Gum Acacia, Adeps, Cera Alba, Cetaceum, Collodion, Cydonium, Hordei Dec., Glycerinum, Glycer. Amyli, Lini Decoct., Sevum, Tragacantha.

**Escharotics.**—*See* Caustics.

**Expectorants.**—Medicines which promote the secretion of bronchial mucus: Acid. Benzoicum, Ammonia, Am. Carb., Ammoniacum, Ammonii Chloridum, Antim. Tartar., Æther, Assafœtida, Bals. Peruv., Bals. Tolut., Benzoin, Copaiba, Cubeba, Euonymin, Galbanum, Ipecacuanha, Lobelia, Myrrha, Scilla, Senega, Styrax Præp.

**Febrifuges.**—Mineral and Vegetable Acids: Alkakengi Tinct., Hydrastin, Potassæ Chloras, Antim. Tart., P. Citras, P. Nitras, Sp. Salis Dulcis.

**Hæmatinics.**—Medicines which augment the number of red corpuscles: Ferri Carbonas Sacch., Ferri et Ammonio-citras, Ferri Chloroxydum, Ferri Phosph. Syr. (Parrish), Ferri Liq. Dialysatus, Ferrum Redactum.

**Hæmostatics.**—Substances which arrest hemorrhage.—*See* Styptics.

**Hypnotics.**—(Soporifics)—Medicines which cause sleep: Cannabis Ind., Chloral, Chloroformum, Codeia, Conium, Croton-chloral, Hyoscyamus, Lupulus, Morphia, Opium, Papaver, Sumbul, Morphiæ Bimeconatis Liquor.

**Irritants.**—Substances which stimulate and cause irritation or inflammation of the parts they are applied to: Acidum Aceticum Glaciale, Acetum Cantharid., Antim. Tart., Cataplasm. Sinapis, Charta Epispastica, Charta Sinapis, Empl. Calefaciens, E. Cantharid., E. Picis, Hydr. Iod. Rubr., Hydrarg. Oxid. Rub., Hydr. Perchloridum, Lin. Ammoniæ, Lin. Camph. Co., Lin. Iodi, Lin. Sinap. Co., Lin. Terebinth., Potassa Sulphurata.

**Laxatives.**—*See* Cathartics.

**Narcotics.**—Medicines which cause stupor or sleep, allay pain, arrest inordinate secretion, and subdue irritation: Æther, Belladonna, Chloroformum, Conium, Creasote, Dulcamara, Ext. Cannab. Ind., Hyoscyami Ext., Lactuca, Lupulus, Morphia, Nitrate of Amyl, Opium, Potassa Sulphurata, Stramonium, Tabacum.

**Nutritives.**—Substances which quicken assimilation and improve the composition of the living tissues: Gum Acacia, Amygdala, Bynes Extractum, Carnis Extract., Cetrariæ Decoctum, Ficus, Glycerinum, Lac, Manna, Morrhuæ Ol., Olivæ Oleum, Ovi Vitellus, Prunum, Sacch. Lactis, Sevum, Sp. Vini Gallici Mist., Theriaca, Uvæ.

**Purgatives.**—*See* Cathartics.

**Refrigerants.**—Medicines which diminish heat and quench thirst: Aqua, Acidum Aceticum, A. Citricum, A. Hydrochlor., A. Tartaricum, A. Phosp. Dilut., A. Sulph. Dil., Ammon. Acet. Liquor, Aurantii Succus, Borax, Limonis Succus, Mori Syrup., Oxymel, Potas. Citras, P. Chloras, P. Nitras, P. Tart. Acida, Æther. Nitr. Sp., Æther. Muriatici Sp., Prunum, Tamarindus.

**Restoratives.**—*See* Tonics.

**Rubefacients.**—Agents which, when applied to the skin, irritate and redden it: Ammoniæ Liquor, Acet. Cantharid., Lin. Camphoræ Co., Lin. Capsici, Lin. Crotonis, Lin. Sinapis Co., Oleum Limonis, Ol. Rosmarini, Ol. Rutæ, Ol. Succini, Ol. Terebinth.

**Sedatives.**—Medicines which depress the action of the heart and of the vascular system, given in palpitation of the heart, hypertrophia cordis, and acute inflammatory diseases.

*Arterial.*—Acidum Hydrocyanicum, Aqua Laurocerasi, Digitalis, Plumbi Acetas, Tabacum, Veratrum Viride.

*Spinal.*—Ammonii Bromidum, Physostigmata, Potassæ Nitras, Potassii Bromidum.

*Soothing.*—Medicines which directly depress the energy of the nervous and vascular system, without causing any previous excitement, used in irritable cough, neuralgic pain, spasmodic affections, and great excitability: Aconitum, Atropia, Belladonna, Camphor, Cerii Oxalas, Chloroform, Colchicum, Conium, Hyoscyamus, Lactuca, Morphia, Morphiæ Bimeconat. Liq., Opium, Papaver.

*Stomachic.*—Acid. Carbolic., A. Hydrocyanic., Argenti Nitras, Bismuth. Carbon., Cerii Oxalas, Creasotum, Potass. Bicarb., Zinci Oxidum.

**Sialogogues.**—Medicines that increase the secretion of the saliva when chewed, used in affections of the face and head, toothache, and in paralysis of the tongue: Armoracia, Mastic, Mezereum, Nicotiana, Piper, Pyrethrum, Sinapis, Zingiber.

**Soporifics.**—*See* Anodynes.

**Stimulants.**—Medicines which increase the sensibility of the nervous and muscular system, and the secretions of the mucous membranes, and give energy to the whole system.

*Hepatic.*—Acid. Benzoic., Acid. Nitrohydrochloric., Aloes, Ammon. Benz., Ammon. Phosp., Hydr. Perchlor., Ipecac., Ol. Croton., Rheum, Senna, Sodæ Benzoas, Sodæ Salicyl., Sodii Chlorid., Taraxacum.

*Intestinal.*—Ammon. Chlorid., Calomel, Magnes. Sulph., Manganes. Sulph., Menispermin, Ol. Ricini.

*Both Hepatic and Intestinal.*—Baptisin, Colchicum, Colocynth, Euonymin, Hydrastin, Iridin, Jalap, Juglandin, Leptandrin, Phytolaccin, Podophyllin, Potass. Sulph., Sanguinarin, Scammonia, Sodæ Tartar., Sodæ Sulph.

*Spinal.*—Acid. Benzoic., Æther, Arnica, Cannabis Ind., Cantharis, Ergota, Nux Vomica, Oleum Cajuputi, Phosphorus, Strychnia.

*Stomachic.*—Ammon. Carbon., Ammoniacum, Ammoniæ Liquor, Armoracia, Assafœtida, Benzoin, Capsicum, Chloroform, Cardamomum, Caryoph., Cinnamomum, Coriandrum, Fœniculum, Macis, Mastic, Piper, Potassæ Chloras, Sinapis, Sodii Chlorid., Sp. Ammon. Fœtid., Sp. Vini Gallici, Valerian. Tinct. Ammon., Zingiber, and most essential oils.

*Mineral Waters.*—Alexandersbad, Barèges, Cauterets, Kreuznach, St. Moritz.

**Stimulants** (*external*).—Cajuputi Ol., Charta Sinapis, Lin. Ammon., Lin. Camph. Comp., Lin. Capsici, Lin. Chloroformi, Lin. Crotonis, Lin. Saponis, Lin. Sinapis Co., Lin. Terebinthinæ, and most essential oils.

**Stomachics.**—Medicines which directly promote the functions of the stomach and improve the appetite and digestion: Acid. Nitrohydrochlor. Dil., Anthemis, Aurantium, Buchu, Calumba, Capsicum, Cardamomum, Caryophyllum, Cascarilla, Chirata, Cinchona, Cinnamomum, Cusparia, Gentiana, Guarana, Lavandula, Limon, Lupulus, Mentha Piperita, Nux Vomica, Pimenta, Quassia, Quinia, Rheum.

**Styptics.**—Remedies which arrest bleeding, used in hemorrhage from the nose, gums, vagina, and rectum: Acid. Gallicum, A. Tannicum, Alumen, Benzoin, Cinchona Pulvis, Creasote, Cupri Sulphas, Ergota, Ferri Perchlor., Ferri Persulph. Liquor, Granati Rad. Cort., Gummi Rubri Extractum Liquidum, Kino, Matico, Spir. Rectificatus, Zinci Sulph.

**Sudorifics.**—*See* Diaphoretics.

**Tonics.**—*Stomachic* are those which improve the functions of the digestive organs, and thus give strength to the system generally: Acid. Hydrochlor. Dil., A. Nitric. Dil., A. Nitrohydrochlor. Dil., A. Phosph. Dil., A. Sulph. Dil., Aurant. Cort., Anthemis, Balsam. Peruvian., Beberiæ Sulphas, Buchu, Calumba, Cascarilla, Chiretta, Cinchona, Decoct. Aloes Comp., Gentiana, Guarana, Lupulus, Nux Vomica, Pareira, Quassia, Quiniæ Sulph., Salicin, Serpentaria, Simaruba, Strychnia.

*Nervine.*—Acid. Arseniosum, Argenti Nitras, Argenti Oxidum, Cerii Oxalas, Cupri Sulphas, Cusparia, Strychnia, Zinci Acetas, Zinci Sulph.

*Acting through the blood, and improving its quality.*—Ferri Carb. Saccharata, F. Ammonio-Citras, F. Citras et Quiniæ, F. Chloroxydum, F. Iodidum, F. Liquor Dialysat., F. Oxid. Magnet., F. Perchlor., F. Pernit. Liquor, F. Phosphas, F. Phosph. Co. Syrup (Parrish), F. Redactum, Morrhuæ Oleum, Sarsæ Radix.

*Mineral Waters.*—Adelheidsquelle, Alet, Altwasser, Auteuil, Berka, Bocklet, Gastein, Kreuznach, Meinberg, Orezza, Ottilienquelle, Pyrmont, St. Moritz, Spa, Schwalbach, Wildungen.

**Eclectic Tonics.**—Cornin (stimulant astringent), Hydrastin and Menispermin (dyspeptic), Cimicifugin and Scutellarin (Nervine sedative).

**Vermifuges.**—*See* Anthelmintics.

**Vesicant.**—Cantharis Charta or Liquor Epispasticus.

# SECTION B.

## REMEDIES EMPLOYED IN SPECIAL AILMENTS.

THE FOLLOWING ARE A FEW DISEASES SELECTED FROM DRS. WARING, NELIGAN, AND OTHERS; THEY MAY SERVE IN SOME MEASURE TO REFRESH THE MEMORY WHEN NECESSARY; BUT FOR A FULLER LIST THE READER IS REFERRED TO THOSE WORKS ON MATERIA MEDICA.

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*Abdominal Plethora.* Fucus Vesiculosus. *Mineral Waters:* Franzensbad, Homburg, Marienbad, Tarasp.

*Abscesses. Large.* Chlori Liquor.

———— *Chronic.* Sarsæ Radix.

*Acne Indurata.* Blisters, Creasotum, Hydr. Ammon., Sulphur. Iodidum.

—— *Punctata.* Arsenic, Pix Liquida, Zinci Sulphas, Sulph. Iodid. Ung.

—— *Rosaceæ.* Arsenic., Amygdal. Mist., Creasotum, Hydrarg. Iodidum Viride, Potassæ Liq., Sulphur.

—— *Simplex.* Ammonii Chloridum, Acid. Hydrocyanic., Borax, Collodion, Ol. Morrhuæ, Potassa Sulphurata, Potassæ Liquor, Sulphur.

—— *Syphilitica.* Hydr. Iodid. Rubr., Hydr. Sulphuratum.

*Adder Bite.* Ammon. Liquor.

*Ague.* Acid. Arsen., Camphor, Ipecacuanha, Quinia, Salicin.

*Albuminuria.* Acid. Gallicum, Ergota, Ferri Perchlor. Tinct., Senegæ Rad.

*Alimentary Canal, Debility of.* Nux Vomica.

**Alteratives.**—Section A.

*Amenorrhœa.* Aloes, Ergota, Ferri Phosphas, Ferrum Redactum, Mistura Ferri Co., Myrrha, Rutæ Oleum.

*Anæmia.*—See *Anti-anæmics.*

**Anæsthetics.**—Section A.

*Anasarca.* Digitalis, Elaterium, Potas. Acet., Juniperi Sp., Scilla.

*Angina Pectoris.* Argenti Nitras, Amyl Nitris, Acid. Hydrocyanic., Belladonna, Zinc. Sulph.

**Anodynes.**—Section A.

**Antacids.**—Section A.

**Antalkalines.**—Section A.

*Antaphrodisiac.* Camphora, Potassii Bromid.

**Antemetics.**—Section A.

**Anthelmintics.**—Section A.

**Anthidrotics.**—Section A.

**Anti-Anæmics.**—Section A.

**Antidotes.**—Section A.

**Antilithics**—Section A.

**Antiparasitics.**—Section A.

**Antiperiodics.**—Section A.

**Antiseptics.**—Section A.

**Antispasmodics.**—Section A.

**Aperients.**—Section A.

**Aphrodisiac.**—Section A.

*Aphonia.* Armoraciæ Rad., Pyrethrum.

*Aphthous Ulcerations of Mouth.* Argenti Nitras, Borax, Confect. Rosæ Gall., Myrrha, Potass. Chlor., Quinia.

*Apoplexy.* Aloes, Croton. Ol., Terebinth. Enema, Hydrarg. Subchlor.

*Appetite, to promote.* Acid. Sulph. Dil., Tinct. Chiretta. *Mineral Water:* Apollinaris.

**Aromatics.**—Section A.

*Ascarides.*—See *Anthelmintics.*

*Asthma.* Acid. Hydrocyanic. Dil., Ammon. Fœtid. Spirit., Ammoniacum, Amyl Nitris, Belladonna, Camphor, Cannab. Ind., Chloral, Chloroformum, Charta Nitrata, Balsam. Peruvian., Lobelia, Myrrha, Potass. Bromid., Stramonium, Tabaci Fol.

**Astringents.**—Section A.

*Baldness.* Bals. Peruv., Crinale Linimentum, Crotonis Lin., Rosmarini Infus.

*Barrenness. Mineral Water:* Ems.

*Bed Sores.* Argenti Nitras, Acid. Sulphuros., Amadou, Balsam Peruv., Collodion, Zinci Oxid. Ung.

*Bile, deficiency of.* Aloes Socot., Fel Bovinum. *See Stimulants.*

*Biliary Calculi.* Sapo, Sodæ Bicarb.

*Bites of fleas, to prevent.* Lavand. Ol., Pyrethrum Roseum, Camphora.

*Bilious Vomiting,* } Acid. Phosp. Dil.
*,, Diarrhœa,* }
*Bladder, irritable.* Belladonna, Buchu, Camphora, Triticum Repens, Uvæ Ursi, Hyoscyamus, Matico, Acid. Carbolic., Pareiræ Extr. Liq. *Mineral Waters:* Fachingen, Malvern, Pougues, Langenbrücken, Luhatschowitz.
*Bladder, Catarrh of the.*—See *Catarrhus Vesicæ.*
*Bladder, distension of.* Camphor.
,, *inflammation of.* Acid. Benzoic.
*Blennorrhœa.*—See *Gonorrhœa.*
*Blister, to heal.* Ung. Galban. Co.
,, *to keep open.* Ung. Canthar., Ung. Sabinæ.
*Blood restorers.*—See *Tonics.*
*Boils.* Cerevisiæ Ferment., Farina Tritici, Mel, Ficus, Ferrum.
*Bones, Fracture of.* Symphytum, Calci Phosphas.
*Bowels, Torpidity of.*—See *Cathartics.*
——— *distended.* Aloes Socot.
——— *Inflammation and Irritation of.* Ricini Oleum.
*Brain, excited.* Potass. Bromid.
—— *Inflammation of.*—See *Meningitis.*
*Breath, Fœtor of.* Acid. Carbolic., Glycerin. Acid. Carbolic., Carbo Ligni, Potass. Chloras, Pepsine.
*Bronchitis.* Acid. Sulphuros. Spray, Ammoniacum, Ammon. Carb., Ammon. Chloridum, Antim. Tart., Assafœtida, Copaiba, Cubeba, Chloral, Galbanum, Iodum, Larix, Lobelia, Pix Liquid., Plumb. Acet., Scilla, Terebinth. Confectio. *Mineral Waters:* Kronthal, Labassère, Landeck, Langenbrücken, Lippspringe, Luhatschowitz, Neuenahr.
————*Chronic.* Iodi Vapor, Camphor. et Lac, Assafœtida, Copaiba, Ipecac., Lobelia, Senega, Serpentaria, Tar Water.
*Bronchocele.* Hyd. Iod. Rub. Ung., Iodum, Potass. Bromid.
*Brow Ague.* Quiniæ Sulph.
*Bruises.* Acetum, Acid. Acetic. Dil., Alum, Arnica, Plumb. Subacet. Dil. Liq., Saponis Linim., Sodii Chlorid., Sp. Vini Rect., Ammon. Chlorid. Lotio.
*Buboes.* Chlori Liquor, Hydr. Ung., Iodum.
*Bunions.* Amadou Plaster.
*Burns and Scalds.* Acid. Carbolic. c. Oleo, Acid. Sulphuros., Acid. Tannic. c. Oleo, Argenti Nitras, Calcis Lin., Calcis Carbonas, common Chalk, Calcis Chlor. Liquor, Carron Oil, Collodion, Creasotum, Creta Præpar., Gossypium, Lini Oleum, Olivæ Oleum, Sp. Vini Rect., Terebinth. Oleum.
*Bursæ.* Ammon. Chlorid.

*Calculus, Renal, passage of.* Alchemilla, Opium, Triticum Repens.
*Calculi, Lithic Acid.* Ammon. Phosph., Borax, Calcis Liq., Lithiæ Carb., Potassæ Carb., Sodæ Carb., Sodæ Sulphas.
——— *Oxalate Lime.* Lini Semen.
——— *Phosphatic.* Acid. Nitric. Dil., Pareiræ Extr. Liquid.
*Cancer.* Acid. Sulph. (Nordhaussen), Arsenical Paste, Acid. Arsen., Acid. Sulphuros., Acid. Tannic., Bromum, Chloral, Antim. Chlorid., Conium, Ferri Arsenias, Hyd. Nit. Acid. Liq., Iodoform, Potass. Permanganas, Zinci Chlorid., Ung. Stramonii.
——— *of the Uterus.* Bromine.
*Carbuncles.* Acid. Carbolicum, Cerevisiæ Fermentum, Hyd. Co. Ung., Potassii Bromidum, Ung. Galban. Co.
*Carcinoma.* Aconitum.
*Cardialgia or Heartburn.* Bismuth. Subnitras, Pulv. Doveri.
*Carious Tooth.* Arsenical Paste.
**Carminatives.**—Section A.
*Catarrh.* Ammoniacum, Bals. Peruv., Dulcamara, Sp. Ammon. Fœtid., Cetraria, Glycyrrhiza, Amygdala Dulc., Lini Semen, Lobelia, Sp. Æth. Nit., Lichen Island., Cinchon. Cortex, Quiniæ Sulph., Matico, Myrrha, Pix Liquid., Senega.
*Catarrhus Vesicæ.* Ammoniæ Benzoas, Potassæ Chloras, Buchu, Uva Ursi, Triticum Repens, Maticæ Tinct. *Mineral Waters:* Langenbrücken, Pougues.
*Chalk Stones in Gout.* Ammoniæ Benzoas.
**Cathartics.**—Section A.
**Caustics.**—Section A.
*Chancres.* Acid. Nitric., Argent. Nitr., Iodoform, Hydrarg. Nigra Lotio, Hydr. Nitrat. Liq. Acid., Hydr. Ox. Rubr.
*Chaps.* Cerat. Camphor., Glycerini Ung.
*Chilblains.* Alum Poultice, Argenti Nitras, Boracis Ung., Calc. Chlor. Liq., Capsici Liniment., Creasotum, Glycerinum.
*Chlorosis.* Ferri Chlorox. Liq., Ferri Perchlor. Tinct., Ferr. Redactum. Myrrha, Nickel Sulphas. *Mineral Waters:* Contrexville, Franzensbad, Rippoldsau.

**Cholagogues.**—Section A.

*Cholera.* Camphor, Capsicum, Creasotum, Pulv. Salinus Dr. Stevens, Argenti Nitras, Sodii Chlorid., Sumbul, Board of Health Cholera Mixture.

——— *Infantium.* Menth. Pip. Ol., Creasote, Rheum, Hydr. Subchlor., Ol. Ricini.

*Chordee.* Belladonna, Camphor, Lupulinum, Opium, Potassii Bromid.

*Chorea.* Argenti Nitras, Arsenic. Liquor, Cerii Oxalas, Chloral, Cimicifugin, Conium, Hyoscyamus, Cupri Sulphas, Ferrum Redactum, Liq. Arsen. Chloridi (Lond. Pharm.), Morrhuæ Ol., Nux Vomica, Physostigmatis, Ruta, Valeriana, Zinci Sulphas et Valerianas.

*Cold in the Head.* Acid. Tannic.

*Colic.* Cajuputi Oleum, Guarana, Lavand. Oleum, Magnes. Sulph., Menth. Pip. Ol., Opium, Ricini Oleum, Rutæ Ol.

——— *Flatulent.* Carui.

*Conjunctiva, Inflammation of.* Opii Vinum.

*Constipation.* Aloes Decoct. Co., Alum, Cambogia, Cassiæ Pulp., Colocynth. Pulv., Croton Ol., Elaterii Pulv. Co., Ficus, Glycyrrh. Pulv. Co., Iridin, Lactuca, Magnesia, Magnesiæ Sulph., Manna, Mel, Mori Succus, Nux Vomica, Olivæ Ol., Ricini Ol., Rheum, Sapo Castil., Scammonium, Senna, Sinapis Semen, Soda Tartarata, Sodæ Phosphas, Sulphur, Tabaci Enema. *Mineral Waters:* Carlsbad, Carlsbad Salt, Friedrichshall, Ofen, Pullna.

*Constipation of Infants.* Cassiæ Pulp., Glycyrrh. Pulv. Co., Rhei Pulv. Co., Ricini Oleum, Scammon. Pulv. Co., Sennæ Syrupus.

——— *Habitual.* Belladonna.

——— *Obstinate.* Cambogia, Colocynthis, Croton. Ol., Tabaci Enema, Podophyllin.

*Consumption.* Calc. Hypophosph., Camph. Co. Tinct., Ferri Phosp. Co. Syrup., Morrhuæ Ol., Sacchar. Lactis.

*Convalescence after Debilitating Disease.* Acid. Sulph. Dil., Calumba, Cascarilla, Chirata, Cusparia, Quassia.

*Convulsions.* Ammon. Fœtid. Sp., Belladonna, Chloroform, Opium, Rutæ Oleum, Enema Terebinth.

*Cordial.* Cardamoms.

*Corns.* Acid. Aceticum Glaciale, Ammon. Chlorid., Argent. Nitras, Plumbi c. Sapone Emp.

*Coryza.* Acid. Tannic., Sodii Chlorid., Zinci Oxidum.

*Cough.* Acid. Sulph. Dil., Antim. Vinum, Gum Acacia, Amygd. Amara, Cetaceum, Codeiæ Syr., Conium, Copaiba, Cubeba, Glycyrrhiza, Ipecacuanha, Lini Semen, Lobelia, Morphiæ Troch., Scilla, Styrax Præp.

*Cough, Chronic.* Benzoin. Co. Tinct.

——— *Convulsive.* Belladonna, Cannabis Indica, Stramonium.

——— *Spasmodic.* Acid. Hydrocy. Dil., Tinct. Camph. Comp.

——— *Tickling.* Acaciæ Gum., Acid. Phosph. Dil., Morphia, Can. Ind. Tinct.

*Cramp.* Cannab. Indica.

*Croup.* Cubebæ Oleum, Emetics. Antim. Tart., Cupri Sulph., Ipecac., Lobelia. Externally, Camph. Linim. Co.

*Cutaneous Diseases.* Acid. Arsen., Amylum, Antim. Sulphurata, Buchu. *Mineral Waters:* Achselmannstein (Aix-les-Bains, Eczema), Aix-la-Chapelle, Bagnères-de-Luchon, Barèges, Bourboule, Cauterets, Croft, Gilsland, Ischia, Krankenheil, Kreuznach, Leuk, Lucca, Nenndorf, Plombières, Schinznach, Schlangenbad, Strathpeffer, Tarasp, Vals, Vernet, Weilbach.

*Deafness.* Glycerinum, Fel Bovinum.

*Debility.* Calcis Hypophosphis, Cinch. Cortex, Ferrum, Quin. Sulph., Sp. Vini Rect. *Mineral Waters:* Berka, Orezza, Schlangenbad, St. Moritz, Spa.

——— *of Lungs and Stomach.* Cetraria.

——— *Scrofulous.* Quiniæ Sulph., Quiniæ Dikinatis Syr.

*Debility of Digestive Organs.* Acid. Sulph. Dil., Boldo, Cetraria, Calumba, Caryophyllum, Ferri Phosphas. Syrup. Co., Gentiana, Ignatia Amara, Morrhuæ Ol., Nux Vomica Tinct., Pepsine, Potass. Ferrocyanid., Rhei Infus., Strychniæ Liquor. *Mineral Waters:* Alet, Apollinaris, Orezza, Spa, Schwalbach.

*Delirium Tremens.* Ammoniæ Liquor, Chloral Hydras, Digitalis, Sumbul.

**Demulcents.**—Section A.

*Depilatory.*—*Vide* page 297.

**Desiccants.**—Section A.

*Diabetes.* Acid. Phosphor. Dil., Jordan Almond Cakes, Creasotum, Codeia, Ferri Perchlor. Tinct., Ferri Phosphas, Potass. Permanganas, Uva Ursi. *Mineral Waters:* Carlsbad, Vichy.

**Diaphoretics.**—Section A.

*Diarrhœa.* Acid. Carbolicum, Acid. Phosph. Dil., Acid. Tannic., Acid. Sulph. Dil., Belæ Fructus, Bismuthi Subnitras, Calcis Aqua, Calcis Carbolas, Calcis Carbon. Sacch., Calcis Liquor, Camphora, Capsicum, Catechu, Creta Præp., Doveri Pulv., Geranin, Granati Cort., Guarana, Gummi Rubrum, Hæmatoxylum, Kino, Krameria, Opium, Plumbi Acetas, Quiniæ Sulph., Quiniæ Carbolas, Rhei Tinct., Ricini Oleum, Serpentaria, Simaruba, Sodii Chlorid., Dr. Stevens's Pulvis Salinus, Sumbul.

——— *Chronic.* Cascarilla, Cetaceum, Cetraria, Cupri Sulph., Cinchona, Ferri Pernit. Liquor, Hæmatoxylum, Plumbi Acetas, Quiniæ Sulph., Simaruba.

*Digestive Organs, Debility of.*—See *Debility.*

**Disinfectants.**—Section A.

*Diphtheria.* Acid. Carbolic., Acid. Hydrochlor., A. Lacticum, Acid. Sulphuros., Argenti Nitras, Ferri Perchlor. Liq. fort., Glycerin, Potas. Chloras, Potas. Permanganas, Iodi Tinct.

**Diuretics.**—Section A.

*Dropsy.* Ammon. Benzoas, Ammon. Chlorid., Buchu, Cajuputi Ol., Cambogia, Colchicum, Croton. Ol., Elaterium, Iodum, Jalapa, Junip. Oleum, Lactuca, Nux Vomica, Parietaria, Potass. Acet., Potass. Iodidum, Potass. Tart. Acid., Rhamni Succus, Scoparius, Sodæ Bicarb., Æth. Nit. Sp.

——— *Hepatic.* Ammon. Chlor., Hydrarg. Subchlor., Taraxacum.

——— *Inflammatory.* Limonis Succus.

——— *Portal.* Ammonii Chloridum.

*Dypsomania.* Capsicum.

*Dysentery.* Acid. Tannic., Belæ Extract. Liquid., Cascarillæ Inf., Cupri Sulph., Cuspariæ Inf., Doveri Pulv., Geranin, Guarana, Gummi Rubrum, Hæmatoxylum, Ipecacuanha, Lini Decoct., Mudar, Plumb. Acet., Ricini Oleum, Sodæ Chlorin. Liq., Sumbul.

*Dysentery, Chronic.* Cetraria, Cusparia, Hæmatoxylum, Plumbi Acet., Plumbi Pil. c. Opio, Rheum, Simaruba, Uva Ursi.

*Dyspnœa.* Æther, Croton - Chloral Hydrat., Lobelia.

*Dysmenorrhœa.* Ammon. Acetat. Liquor, Borax, Senega, Bromides.

*Dyspepsia.* Aloes, Acid. Hydrocy. Dil., Ammon. Liquor, Bismuth. Carb., Bismuth. Subnitras, Buchu, Calcis Liq., Calumba, Capsici Tinct., Carbo Ligni, Cascarillæ Inf., Cetraria, Æther, Ferrum, Ferri Phosph., Geranin, Hæmatoxylum, Limon, Magnesia, Menispermin, Nux Vomica Ext., Pepsine, Potass. Liquor, Pot. Bicarb., Pot. Sulph., Quassia, Rheum, Salicinum, Sapo Durus, Senna, Serpentaria, Sodæ Liq., Sodæ Bicarb., Sodæ Carb., Sodæ Chlorin. Liq., Zingiber. *Mineral Waters:* Alet, Apollinaris, Charlottenbrunnen, Dinsdale, Ems, Gilsland, Homburg, Orezza, Vals.

——— *Atonic.* Acid. Sulph. Dil., Anthem. Inf., Armoracia, Calumba, Camphor, Capsicum, Catechu, Potas. Ferrocyan., Gentiana, Hæmatoxylum, Pepsine, Pip. Nig.

——— *Irritative.* Bismuth. Subnitras, Cerii Oxalas.

——— *Chronic.* Aloes, Morrhuæ Ol., Pepsine.

**Ecbolics.**—Section A.

*Eczema.* Acid. Carbolic., Acid. Salicylic., Creasoti Ung., Glycerinum, Hydr. Ammon., Sodæ Arsenias, Vaselin. Plumbi Subacetatis. *Mineral Waters:* Aix-les-Bains.

——— *Chronic.* Ferri Arsenias, Ol. Betulæ Alb.

*Elephantiasis.* Ferri Arsenias.

**Emetics.**—Section A.

**Emmenagogues.**—Section A.

**Emollients.**—Section A.

*Enteritis.* Ricini Oleum.

*Epidermis, to dissolve.* Borax.

*Epilepsy.* Ammon. Bromid., Argenti Nitras, Castoreum, Cerii Oxalas, Cupri Sulphas, Potass. Bromid., Quiniæ Sulphas, Strychnia, Zinci Sulph., Zinci Valerianas, Valeriana.

*Eructations, Fœtid.* Carbo Ligni, Acid. Carbolic., Pepsine.

*Eruptions attended with itching.* Acid. Carbolic.

*Eruptions, Chronic.* Cerii Oxalas, Potassa Sulphurata.

——— *Scrofulous and Venereal.* Hyd. Iodid. Viride.

*Eruptions, Pustular, to produce.* Croton. Oleum, Antim. Tartarata.

*Erysipelas.* Amyli Glycer., Amylum, Cinchona, Collodion, Creasotum, Creta, Lycopodium, Quinia, Sp. Vini Rect.

*Erythema.* Sp. Vini Rect.

**Escharotics.**—Section A.

*Evacuations, Fœtid.* Potas. Permangan., Sodæ Chlor. Liq.

*Excitement, Nervous, to quiet.* Moschus, Sumbul, Potassii Bromidum.

*Excoriations.* Alum, Amylum, Boracis Glycerinum, Fuller's Earth, Glycerini Ung., Plumbi Carb., Zinci Oxid.

**Expectorants.**—Section A.

*Expectoration, Fœtid.* Acid. Carbolic., Potass. Permanganas, Chlorinum.

——— *to diminish.* Aconitum, Cetraria, Larix, Quinia.

*Eyes, application for the.* Vapor Acid. Hydrocyan., Chloroformi Vapor, Lapis Divinus, Cydon. Decoct., Hyd. Iod. Rub. Ung., Hyd. Nitrat. Ung., Opii Vinum.

—— *to contract pupil of.* Physostigmat. Faba, Pilocarpia.

—— *to enlarge pupil of.* Belladonna, Atropia, Daturina.

—— *purulent discharge from.* Alum, Astringent Lotion Gum. Rub.

*Face Lotion.* Benzoin, Hydr. Perchloridum c. Amygdal. Mist.

*Fainting.* Æther.

**Febrifuges.**—Section A.

*Feet, perspiring.* Acid. Carbolic., Potas. Permanganas, Zinci Oxid. Ung.

*Fever.* Acid. Carbolic., Acid. Nitric., Ammon. Acetat. Liquor, Ammon. Citras, Æther. Muriat. Sp., Potassæ Chloras, Potassæ Citras, Potas. Tart. Acid.

—— *hay.* Camphora. Cannab. Ind., Lobelia Inflata, Nux Vomica, Quinia.

—— *bilious.* Cuspariæ Cortex.

—— *intermittent.* Arsenicalis Liquor, Capsici Tinct., Cascarilla, Cinchona, Cuspar. Cort., Nectandra, Kino, Quassia, Quinia, Santoninum.

——— *of drunkards.* Piper Nigrum.

—— *low.* Calendula, Castor.

—— *puerperal.* Ammonia, Menth. Pip. Ol., Opium.

—— *remittent.* Cinchona, Beberiæ Sulph., Nectandra, Quiniæ Sulph.

—— *scarlet.* Castorei Tinct., Capsici Tinct., Chloral.

—— *typhoid.* Acid. Nitr. Dil., Ammon. Liq., Amyli Enema, Argent. Nitr., Cerevisiæ Ferment., Chlori Liq., Cusparia, Serpentaria, Sumbul Tinct., Belladonna.

*Flatulence.* Æther, Aloes, Anethum, Anisum, Assafœtida, Capsicum, Carbo Ligni, Caryophyllum, Lavand. Oleum, Menthæ Pip. Ol., Menthæ Virid. Ol., Piper Nigrum, Zingiber.

*Flatulent Colic.* Cajuputi Ol., Carui Fructus.

*Flatulence, hysteric.* Assafœtidæ Tinct.

——— *infantile.* Fœniculi Infusum.

*Fleas, to keep away.* Camphora, Pyrethrum Roseum.

*Flooding.* Ergota, Vincæ Major. Ext.

*Flies and gnats, to keep away.* Rutæ Ol., Tereb. Ol.

*Freckles.* Calcis Lin.

*Fœtor of breath.* Acid. Carbolic., Glycerin. Acid. Carbolic.

*Fungous Flesh.* Alumen Exsiccatum, Cupri Sulphas.

*Gall Stones.* Sapo Durus.

*Gangrene.* Baptisin.

——— *senile.* Chloroformum.

*Gargle, astringent.* Acetum, Alum, Gummi Rubrum, Krameria, Rosæ Inf. Acid.

——— *for Putrescence.* Acid. Carbolic., Potas. Permangan., Sodæ Chlorinat. Liq.

*Gastralgia.* Æther, Argenti Nitras, Manganesii Oxid. Nig., Pepsine. *Mineral Water :* Contrexville.

*Gastric Irritation.* Bismuth. Ammonio-Citras, Potass. Acetas.

*Gastrodynia.* Acid. Hydrocy. Dil., Aconitum, Calumba, Cerii Oxalas, Manganesii Oxid. Nig., Stramonium.

*Generative Organs, loss of tone.* Belladonna, Nux Vomica, Phosphorus.

——— *sedative of.* Potass. et Ammon. Bromid.

*Glands, scrofulous.* Fucus Vesiculosus, Iodum, Ol. Morrhuæ.

——— *indurated.* Cadmii Iodid., Potass. Iodidum, Potass. Iodid. Linim.

*Glandular diseases.* Calcii Chlorid. Siccum, Sodæ Bicarb.

——— *enlargements.* Ammon. Chlorid., Croton. Oleum, Ammoniaci c. Hydrarg. Emp., Hydrarg. c. Ammoniæ Mur. Ung., Morrhuæ Oleum, Iodi Linim., Sodæ Chloratæ Liquor. *Mineral Waters :* Kœnigsdorff, Leuk, Marienbad.

*Gleet.* Bals. Peruvianum, Cantharis, Copaiba, Creasotum, Ergot, Ferri Perchlor. Liquor, Galla, Piper Nigrum, Zinc. Acet.

*Gonorrhœa.* Acid. Tannic., Bals. Canadensis, Copaiba, Creasotum, Cubeba, Hyd. Nit. Acid. Liq., Hyd. Subchlor., Plumbi Acetas, Potass. Bicarb., Potass. Permang., Santal Flav. Ol., Styrax Præparata, Zinci Acetas, Z. Sulph., Z. Chlorid., Z. Sulphocarbolas.

——— *Chronic.* Acid. Tannic. Injectio, Alum, Cannab. Indic., Cubebæ Tinct.

*Gout.* Ammoniæ Benzoas, Ammoniæ Phosphas, Cajuputi Ol., Colchicum, Crotonis Oleum, Hyoscyamus, Lithiæ Carbonas, Lithiæ Citras, Lithiæ Guaiacas, Magnesia, Potass. Citras, Sabina, Sodæ Carbonas, Veratrum Viride. *Mineral Waters:* Adelheidsquelle, Aix-les-Bains, Baden-Baden, Buxton, Carlsbad, Eilsen, Ems, Franzensbad, Ischia, Marienbad, Nenndorf, Neuenahr, Ofen, Plombières, Soden, Strathpeffer, Tarasp, Toeplitz, Vichy, Weilbach, Wiesbaden, Wildbad.

—— *painful.* Hyoscyamus, Colchici Extr. c. Pulv. Doveri.

*Gravel.* Potass. Citras, Potas. Bicarb. *Mineral Water:* Marienbad.

*Griping, to diminish.* Anisum, Cardamoms, Hyoscyamus, Menth. Pip. Oleum.

*Gums, inflamed.* Krameriæ Tinct.

—— *spongy.* Gummi Rubri Tinct., Myrrhæ Tinct., Potass. Chloras, Quercus Decoct.

*Hair falling off.* Crinale Linimentum, Crinalis Lotio, Crotonis Linim.

—— *to Blacken.* Acid. Pyrogallic.

*Hay Fever.* Belladonna, Camphora Spirit., Cannab. Ind., Lobelia Inflata, Quiniæ Sulphas Neutr., Stramonium.

*Hematuria.* Acid. Sulph Dil., Acid. Tannic., Alumen, Galla, Ipecac., Matico, Plumbi Acet., Zincum.

**Hæmatinics.**—Section A.

*Hemorrhage.* Acid. Gallic., Acid. Tannic., Alumen, Argenti Oxidum, Catechu, Colloid Styptic, Erigerontis Oleum, Galla, Gummi Rubr., Matico, Plumb. Acetas, Terebinth. Oleum.

———— *internal.* Alum, Cinnamomum, Creasotum, Gummi Rubr.

———— *local.* Acid. Gallic. Glycerinum.

———— *passive.* Ferri Perchlor., Hæmatoxylum, Hamamelis Virgin. Tinct., Gummi Rubrum, Krameria.

————*pulmonary.* Ergota, Plumb. Acet.

———— *Uterine.* Acid. Gallic., Acid. Tannic., Cannab. Indic., Ergota, Limonis Succus.

*Hemorrhoids.* Aloes Socot., Galbani Ung. Co., Gallæ Ung., Picis Pilulæ et Capsulæ, Piper Nigrum, Sulphur. *Mineral Waters:* Luhatschowitz, Mergentheim.

*Hemoptysis.* Galla, Digitalis, Plumb. c. Opio Pil.

**Hæmostatics.**—Section A.

*Headache, bilious.* Hyd. Subchlorid., Ammon. Liq., Menth. Pip. Ol.

———— *nervous.* Ammon. Bromid., Ammon. Fœt. Sp., Amyl Nitris, Potass. Bromid., Rosmarini Oleum, Ammon. Aromat. Spirit., Tinct. Succini.

———— *sick.* Guarana, Magnesia, Potass. Ferrocyanid.

*Heartburn.* Bismuthum, Doveri Pulvis, Magnesiæ Carb., Sodæ Bicarb.

*Heat of Surface.* Acetum, Acid. Acetic. Dil., Acid. Phosph. Dil.

*Hectic Sweating.* Acetum, Acid. Acetic. Dil., Acid. Gallic.

*Hepatics.*—See *Stimulants.*

*Hepatitis.* Ammon. Chlorid., Hyd. Subchlorid.

*Hernia, strangulated.* Chloroform, Enema Tabaci.

*Herpes.* Ferri Arsenias, Glycerinum, Hydrargyrum Ammoniatum, Ulmi Decoctum, Zincum.

*Hooping Cough.*—Vide *Whooping Cough.*

*Hiccough.* Anethum.

*Hydrocele.* Glycerinum Iodi.

*Hydrocephalus.* Hydr. Subchloridum.

*Hydrophobia.* Cannabis Indica.

**Hypnotics.**—Section A.

*Hypochondria.* Chloral, Cypripedin, Lavand. Oleum. *Mineral Water:* Homburg.

*Hysteria.* Ammon. Carb., Ammonii Bromid., Assafœtida, Cajuputi Ol., Castoreum, Lavand. Ol., Potass. Bromid., Rosmarini Ol., Rutæ Ol., Terebinthinæ Ol., Valeriana Radix, Zinci Valerianas. *Mineral Waters:* Homburg, Lippik, Spa.

*Hysteric Nausea.* Creasotum.

———— *Flatulence.* AssafœtidæTinct., Galbanum.

*Impetigo.* Hydrargyrum Ammon.

*Incontinence of Urine.* Acidum Benzoic., Buchu, Ergota.

*Indigestion, Atonic.* Gentiana, Ignatia, Pepsine. *Mineral Waters:* Kissingen, Marienbad, Orezza, Vals.

*Influenza.* Ammon. Liq. Acetat., Antim. Tart., Sp. Æther. Nitr.

*Insects, to keep away.* Camphor, Lavand. Oleum, Pyrethrum Roseum, Terebinth. Oleum.

*Insensibility, to produce.* Æther, Chloroform, Methylin. Bichlorid.

*Insomnia.*—See *Sleeplessness.*

*Intermittents.*—See *Fever.*

*Intermittents with Drunkards.* Piper Nigrum.

*Iritis.* Belladonna, Hydrarg. Subchlor., Hyoscyamus, Quinia.

**Irritants.**—Section A.

*Irritation, Nervous.* Cannabis Indica.

*Issues, to keep open.* Elemi Ung., Sabinæ Ung.

——— *to heal.* Cetacei Ung., Adeps Benzoat.

*Itch.*—See *Scabies.*

*Itching of Skin, to allay.* Acid. Hydrocy. Dil., Hydr. Oxidi Rub. Ung., Sodæ Carbonas, Mistura Amygdalæ Amaræ.

*Jaundice.* Hyd. Subchlorid., Potassæ Sulphas, Sapo Durus, Taraxacum.

*Joints, Diseased*
——— *Enlarged*
——— *Indurated*
Ferri Iodidum, Iodum, Morrhuæ Oleum, Potass. Iodid., Veratriæ Ung., Potass. Iodid., Linum.

*Kidneys, Disordered.* Buchu, Dulcamara, Hemidesmus, Mezereum, Pareira, Terebinth. Ol., Uva Ursi. *Mineral Waters:* Fachingen, Kissingen, Leuk, Malvern, Shap, Vichy.

*Kidneys, hemorrhage from.* Acid. Gallic., Iron Alum.

*Laryngitis, Chronic.* Croton-Chloral.

*Larynx, relaxed.* Ammon. Bromid. Gargarisma.

**Laxatives.**—Section A.

*Lead, Poisoning by.* Alum, Iodum. *Mineral Water:* Weilbach.

*Leech bites, to stop.* Alum, Argent. Nitr., Ferri Perchlor., Ferri Chloroxid., Matico.

*Leeches, to dislodge if swallowed.* Sodii Chlorid.

*Lepra.* Acid. Carbolic., Arsenici Iodidum, Dulcamara, Glycerinum, Picis Ung., Potass. Sulphurata.

*Leprosy.* Balsam. Dipterocarpi.

*Leucorrhœa.* Acid. Gallic., Acid. Tannicum, Alumen, Catechu, Ferri Pernit. Liquor, Galla, Granati Cort., Gummi Rubrum, Krameria, Potass. Iodid., Quercus Cort., Santal. Flav. Oleum, Sodæ Sulpho-Carbolas, Styrax Præparatus, Zinci Sulph., Zinci Sulpho-Carbolas. *Mineral Waters:* Kreuznach, Wildungen.

*Lice, to destroy.* Hydrarg, Ammoniat., Hyd. Perchlor., Olivæ Oleum, Hydr. Oleatum.

*Lichen.* Ferri Arsenias, Glycerinum.

*Lips, cracked.* Bals. Peru.

*Lithiasis. Mineral Waters:* Baden-Baden, Mergentheim, Vals, Vichy.

*Liver, Obstruction of.* Acid. Nitro-Hydrochlor. Dil., Boldo, Chlori Liquor, Hydrargyrum, Podophyllin, Potass. Bromid., Potass. Nitras, Taraxacum. *Mineral Waters:* Aix-la-Chapelle, Carlsbad, Ems, Friedrichshall, Kissingen, Leamington.

*Liver, Enlarged.* Acid. Nitro-hydrochloric. Dil., Conium, Potass. Bromidum.

——— *Torpidity of.* Podophyllin, Potass. Nitras, Sapo Durus, Taraxacum.

*Lumbago.* Belladonna, Lin. Bellad. Comp., Picis Burgundicæ Empl., Quiniæ Sulphas.

*Lupus.* Ferri Arsenias.

*Mania.* Cannabis Indica, Ergota, Potass. Bromidum.

*Measles.* Acid. Carbolic.

*Melæna.* Hydrarg. Subchloridum.

*Meningitis, Acute.* Antim. Tart., Hydr. Subchloridum, Digitalis, Purgatives (Ice externally).

*Menorrhagia.* Alum, Beberiæ Sulphas, Ferri Pernitratis Liquor, Galla, Krameria, Uva Ursi, Vincæ Major. Ext. Fluid.

*Menstruation, Defective.* Ferrum, Myrrha.

——— ——— *Painful.* Ergota et Hyoscyam.

*Mercury, Poisoning by. Mineral Waters:* Weilbach.

*Mesenteric Diseases.* Aloes Socot.

*Midges, to keep away.* Tereb. Ol.

*Milk Secretion, to increase.* Fœniculum, Ricini Fol. Decoctum.

*Mollities Ossium.* Calcis Phosphas.

*Mucous Discharges.* Cantharis, Copaiba, Catechu, Cupri Sulph., Galla., Hydr. Perchlor., Iodum, Krameria, Plumbi Acet., Sodæ Chlor. Liquor, Tritici Decoctum.

——— *Membrane, Inflammation of.* Althæa Rad., Glycyrrhizæ Rad., Lini Semen. *Mineral Water:* Apollinaris.

*Nævi.* Alum, Liq. Ferri Perchlor. Fort.

**Narcotics.**—Section A.

*Nausea.* Æther, Caryophyllum, Menthæ Pip. Oleum.

——— *in Hysteria.* Creasotum.

——— *in Pregnancy.* Cerii Oxalas, Creasotum, Pepsine.

*Nervousness.* Ammonii Bromid., Assafœtida, Camphor, Cantharidis Tinctura, Castoreum, Cimicifugin, Humulus, Lavand. Tinct. Co., Moschus, Sodæ Arsenias, Sodæ Hypophosphis, Valeriana, Zinci Valerianas.

*Nervous Affections.* Cajuput. Ol.
*Nervous Exhaustion.* Acid. Bromohydric. (with Quinine). *Mineral Waters :* Ems, Gastein.
——— *Irritation.* Camphora, Cannabis Indica.
——— *System, Excited.* Chloral, Ammon. Bromidum, Hyoscyamus.
——— *Debility.* Actæa Racemosa, Calcis Hypophosphis, Phosphorus. *Mineral Water :* Gastein.
*Neuralgia.* Acid. Arsenic., Acid. Sulphuros., Aconiti Lin., Actæa Racemosa, Ammon. Bromidum, Ammon. Chlorid., Atropiæ Solut. hypodermically, Belladonnæ Lin., Camphoræ Lin., Camphor. Lin. Co., Cannabis Indica, Cinchona, Conium, Croton-Chloral. Hydrat., Crotonis Liniment., Ferrum, Ferri Oxid. Magnet., Gelsemii Tinctura, Gelsemin, Iodoform, Menth. Pip. Oleum, Papaveris Decoctum, Quiniæ Sulph., Q. Dikinat. Syr., Scutellarin, Sinapis Cataplasma, Veratriæ Ung., Veratrum Viride, Zinci Valerianas.
*Night Sweats of Phthisis.* Acid. Gallic., Acid. Sulphuric.
*Nipples, Sore.* Argenti Nitras, Bals. Peru., Boracis Ung., Sodæ Chlorinatæ Liq.
*Nitrate of Silver Stains, to remove.* Potass. Cyanid., Potass. Iodid.
*Nocturnal Emissions.* Belladonna, Ferri Bromidum.
*Nodes, Syphilitic.* Emp. Ammoniaci c. Hydrarg., Hyd. Iodid. Rub. Ung.
*Nymphomania.* Potass. Bromidum.
**Nutritive.**—Section A.

*Obesity.* Fucus Vesiculosus. *Mineral Water :* Tarasp.
*Ophthalmia.* Alumen, Ammoniæ Acetat. Liquor, Opium, Ung. Hyd. Nit. Dil., Zinci Acetas, Zinci Sulphas.
*Ozæna.* Acid. Carbolic., Potass. Permanganas, Sodii Chloridum.

*Palpitation.* Cannab. Indic.
*Palsy.* Nux Vomica. *Mineral Water :* Ischia.
*Paralysis.* Belladonna, Ergota, Nux Vomica, Strychnia. *Mineral Waters :* Aix-la-Chapelle, Baden-Baden, Eilsen, Ischia, Kreuznach, Toeplitz.
*Paralysis of Lead Poisoning.* Strychnia.
——— *of the Tongue.* Pyrethrum.
*Paraplegia.* Cantharidis Tinctura.
*Parasitic Lichen.* Acid. Sulphuros.
*Parturient.* Ergot, Gossypii Tinct.
*Pediculi.* Adeps Præpar., Hyd. Ammon. Ung., Sabadilla.
*Pericarditis.* Charta Epispastica, Potassæ Liquor.
*Periostitis.* Ammon. Chlorid., Potassæ Liquor.
*Perspiration, to diminish.* Acetum, Acid. Sulph. Dilut.
——— *Fœtid.* Acid. Carbolic. Glycer., Plumbi Oxid. Ung., Zinci Oxid. Ung.
*Phagedenic Sores.* Acid. Carbolic., Acid. Nitricum.
*Phthisis.* Acid. Carbolic., Acid. Gallic., Aconiti Tinct., Calcis Hypophosphis, Camph. Co. Tinct., Conium, Croton-Chloral. Hydrat., Iodi Vapor, Morrhuæ Oleum, Plumbi Acetas, Saccharum Lactis.
——— *Chronic.* Iodum.
*Piles.*—See Hemorrhoids.
*Pityriasis Versicolor.* Dulcamara, Glycerinum, Borax.
*Placenta, Expulsion of.* Borax, Ergota.
*Plethora.* *Mineral Waters :* Franzensbad, Homburg.
*Pleuritis.* Cantharis, Crotonis Linim., Hydrarg. Subchlor., Potassæ Liquor.
*Pneumonia.* Ammon. Liquor, Antim. Tartarata, Cantharis, Æther. Nitr. Sp., Plumbi Acetas.
*Porrigo.* Hydrarg. Nit. Ung., Hydrarg. Ammon. Ung., Hyd. Perchlor. Ung.
*Pregnancy, Nausea of.* Creasotum, Calcis Sacchar. Liquor, Cerii Oxalas, Pepsine, Potass. Acetas.
*Prolapsus Ani.* Acid. Gallic., Alum. Sulph., Cupri Sulph., Gummi Rubr. Extr. Liq., Krameriæ Rad., Suppositoria.
——— *Uteri.* Quercus Cort. Decoct.
*Prostate, Disease of.* Buchu.
*Prostration.* Moschus, Spirit. Vini Gallici Mistura.
*Prurigo.* Glycerinum, *Genitalium,* Cupri Sulph., *Senilis,* Staphisagria.
*Pruritus Ani.* Plumb. Carb. Ung.
——— *Pudendi.* Argent. Nitr. Solut. 2 grs. to the ℥j.
——— *Scroti.* Limonis Succus.
*Psoriasis.* Acid. Carbolic., A. Pyrogallic., A. Salicylic., Dulcamara, Saponis Emp., Glycerinum, Ferri Arsenias, Picis Unguent., Potass. Arsenitis, Potassa Sulphurata, Soda Subcarb. Solut.
*Pulmonary Chronic Affections.* Pix Burgundica. *Mineral Waters :* Charlottenbrunnen, Clifton, Kronthal, Moffat, St. Moritz, Weilbach.
*Pulse, to quicken.* Cardamomum, Castoreum.

*Pulse, to retard.* A. Carbolic., Aconitum.

*Pupil, to Dilate.* Belladonna, Atropia, Hyoscyamus, Stramonium.

——— *to Contract.* Opium, Physostigmatis Extractum, Pilocarpia.

**Purgatives.**—Section A.

*Putrescence, to Correct.* Acid. Carbolic., Potassæ Permang., Thymol.

*Pyemia.* Potassæ Sulphis.

*Pyrosis.* Acid. Gallic., Bismuthi Subnitras, Bismuth. Carb., Catechu, Cerii Oxalas, Kino, Manganesii Oxid. Nigrum.

**Refrigerants.**—Section A.

**Restoratives.**—Section A.

*Retention of Urine.*—See Urine.

*Rheumatism.* Acid. Arsen., Actæa Racemosa, Ammon. Chlorid., Ammon. Phosphas, Belladonnæ Compositum Lin., Cimicifugin, Chloroform, Camphoræ Lin. Comp., Colchicum, Crotonis Linim., Lithiæ Citras, Lithiæ Guaiacas, Mezereum, Opii Liniment., Phytolaccin, Pini Sylv. Ol., Potass. Liquor, P. Acetas, P. Bicarbonas, P. Citras, P. Iodidum, Salicin, Veratrum Viride. *Mineral Waters:* Adelheidsquelle, Aix-les-Bains, Alexandersbad, Baden, Baden-Baden, Baréges, Bath, Berka, Buxton, Carlsbad, Cauterets, Eilsohn, Franzensbad, Ischia, Kreuznach, Landeck, Langenbrücken, Nenndorf, Neuenahr, Ofen, Plombières, Schinznach, Strathpeffer, Tarasp, Toeplitz, Weilbach, Wiesbaden, Wildbad, Woodhall.

———— *Acute.* Acid. Salicylic., Aconitum, Limonis Succus, Potass. Acet. et Bicarb., Colchicum, Pulv. Doveri, Salicin, Tinct. Ferri Perchlor.

———— *Chronic.* Acid. Arsenias, Antim. Sulphurata, Armoracia, Bals. Peru., Colchicum, Conium, Buchu, Cajuputi Ol., Dulcamara, Guaiacum, Iodum, Camph. Co. Lin., Morrhuæ Oleum, Picis Burgundicæ Emplast., Potassæ Liquor, Syr. Quiniæ Hydriod., Sabina, Sarsæ Rad., Sassafras, Serpentaria, Sodii Iodid., Sulphur, Chelsea Pensioner, Terebinth. Oleum, Iodoform. *Mineral Waters:* Baréges, Berka, Franzensbad, Lucca, Ofen, Toeplitz, Wiesbaden, Woodhall.

———— *painful.* Belladonna, Hyoscyamus, Lin. Camph. Co.

*Rickets, Rachitis.* Acid. Phosphor. Dil., Calcis Liquor, Calcis Phosphas, Creta Præparata, Ferri Phosphas, Morrhuæ Oleum, Parrish's Syrup.

*Ringworm.* Araroba or Goa Powder, Cantharis, Creasoti Ung.

**Rubefacients.**—Section A.

*Salivation, to produce.* Hydrarg. Liniment., Hydr. Iodid. Vir.

——— *Obstinate.* Creasotum.

*Salivary Glands, Stimulant of.* Pyrethrum, Armoracia.

*Sarcina Ventriculi.* Acid. Sulphuros., Sodæ Sulphis, Sodæ Hyposulphis.

*Scabies.* Acid. Carbolic., Adeps Præparatus, Ammonii Chloridum, Calcis Chlorin. Liq., Hydrarg. Ammoniatum, Potass. Sulphurata, Sabinæ Succus, Sulphocarbolates, Sulph. Co. Ung., Sulph. Ung.

*Scalds.* Acid. Carbolic. c. Oleo, Acid. Sulphuros., Linim. Calcis, Lini Oleum, Sp. Vini Rect.

*Scald Head.*—See *Tinea Capitis.*

*Scarlatina.* Acid. Carbolic., Chlori Liquor, Potass. Chloras, Sodæ Chlorinat. Liquor.

*Sciatica.* Aconiti Lin., Iodoform, Bellad. Lin. Comp., Opium.—See also *Rheumatism.*

*Scorbutic Affections.* Sassafras.

*Scrofula.* Calcis Phosphas, Creta Præparata, Ferri Iodid., Fucus Vesiculosus, Hyd. Iod. Rub., Hyd. Iod. Virid., Hyd. Subchlor., Iodum, Mezereum, Morrhuæ Oleum, Potass. Bromid., Potass. Liquor, Pot. Bicarb., Quin. Sulph., Sodæ Bicarb., Sodæ Hyposulphis, Sodii Iodid. *Mineral Waters:* Adelheidsquelle, Arnstadt, Baréges, Cauterets, Ems, Ischia, Kœnigsdorff, Kosen, Krankenheil, Kreuznach, Luhatschowitz, Neuenahr, Reichenhall, St. Moritz, Shap, Soden, Strathpeffer, Vals, Woodhall.

*Scurvy.* Potass. Citras, Limonis Succus, Sassafras Radix.

*Scybala.* Scammonium.

*Sea Sickness.* Amyl Nitris, Camphor, Capsici Tinct., Chloroformum, Creasotum.

**Sedatives.**—Section A.

*Serous Inflammation.* Hyd. Subchlor., Potassæ Liquor.

**Sialogogues.**—Section A.

*Sickness, to arrest.* Acid. Carbolic., Acid. Sulphuros., Acid. Hydrocy. Dil., Calcii Chlorid., Calcis Saccharatus Liquor, Menth. Pip. Oleum.—See also *Vomiting.*

——— *in Pregnancy.* Cerii Oxalas, Pepsine, Potassæ Acetas.

*Skin Abraded.* Collodion.—See *Excoriation.*

*Skin, Cracks in.* Cydonii Decoct.
—— *Diseases of.* Boracis Unguentum, Calcis Chlorinat. Liq., Goa Powder, Huile de Cade, Liquor Carbon. Detergens, Sulphur, Sodæ Arseniatis Liquor, Balneum Alkalinum, Picis Unguentum.
—— *Chronic diseases of.* Acid. Arseniosum, Bismuthi Subnitras, Glycerinum, Bismuthi Nitras, Hyd. Nit. Ung., Hydrarg. Perchlor., Pix Liquida, Hyd. Iodid. Viride, Hyd. Ammon., Hydrarg. Iodid. Rub., Hyd. Oxid. Flav., Hydrarg. Subchlor., Iodum, Mezerei Cortex, Potass. Liquor, Sodæ Arsenias, Sulph. Iodid. Ung.—See also *Cutaneous diseases.*
—— *Venereal.* Mezerei Radix, Sarsa.
—— *Parasitic.* Sodæ Hyposulphis.
—— *Parasitic Lichens.* Acid. Sulphurosum.
—— *Squamous.* Creasotum, Dulcamara, Ferri Arsenias.
—— *Irritable.* Acid. Citric., Amylum, Glycerin. Amyli, Carbon. Deterg. Liq.
*Skin, Itching of.* Acid. Hydrocy. Dil., Amygd. Amaræ Mist., Acid. Citric., Acid. Tartaric., Calcis Chlorata.
—— *Tender.* Chloroformi Linimentum.
*Sleeplessness.* Ammon. Bromid., Chloral Hydrate, Cannab. Indica, Hyoscyamus, Humulus, Morphiæ Bimeconatis Liquor, Potass. Bromidum, Opium.
*Small Pox.* Acid. Carbolic., Chlori Liq., Potassæ Chloras.
*Snake Bites.* Ammon. Liquor, Sodii Chlorid.
**Soporifics.**—Section A.
*Sores, Bed.*—See *Bed sores.*
—— *Cancerous.* Chlori Liquor, Iodoform, Hydr. Oxid. Rub.
—— *Gangrenous.* Alum, Emplastrum Acidi Carbolici, Ferri Perchlorid., Potass. Permang., Sabinæ Succus.
—— *Irritable.* Sambuci Flor. Ung., Sambuci Viride Ung.
—— *Malignant.* Zinci Chlorid.
—— *Phagedenic.* Acid. Nitric.
—— *Putrid.* Acid. Carbolic., Carbo Ligni.
—— *Venereal.* Hydr. Subchlor., Lotio Nigra.
*Sore Nipples.* Argenti Nitras, Bals. Peru., Borax, Ferri Sulph. Solut., Sodæ Chlorin. Liq.
—— *Throats.* Acid. Sulphuros. Spray, Acid. Tannic. Spray, Cubeba, Gummi Rubrum, Mori Syrup., Myrrha, Potass. Nitras, Potass. Chloras, Rosæ Infus.
*Sore Throats, Malignant.* Argent. Nitras, Capsicum, Chlori Liquor.
———— *Putrid.* Acid. Carbolic., Potass. Permang., Chlori Liquor.
———— *Relaxed.* Alum, Capsicum, Gummi Rubri, Krameria.
———— *Ulcerated.* Acid. Hydrochlor. Dil., Hydrarg. Perchlorid.
*Spasmodic Affections.* Cajuput. Ol.
*Spasmodic Cough.* Acid. Hydrocy. Dil.
*Spasms.* Sinapis Cataplasma, Valeriana, Cannabis Indica.
——— *Abdominal.* Assafœtida, Menthæ Piper. Oleum.
*Spleen, Enlargement of.* Arsenicalis Liquor, Ferri Sulphas, Ferrum Redactum, Potass. Bromid., Quinia.
*Sprains.* Acetum, Acid. Acetic. Dil., Plumbi Subacet. Liquor Dil., Arnica, Sodii Chlorid., Sp. Vini Rectif.
**Stimulants.**—Section A.
*Stings.* Ammoniæ Liquor, Chloroform, Ipecacuanha, Sodæ Bicarbonas.
*Stomach Ache.* Æther, Sodæ Bicarb.
*Stomach, Debility of.* Pruni Virg. Syrup., Aurantii Tinctura.
——— *Cramp in.* Æther.
——— *Irritability of.* Bismuthum, Anthemis Flor., Saccharum Lactis.
——— *Ulceration of.* Nitrate of Silver.
——— *Weak.* Cinchona.
**Stomachics.**—Section A.
*Strangury.* Camphor.
**Styptics.**—Section A.
**Sudorifics.**—Section A.
*Suppurating Surfaces.* Acidum Carbolicum, Zinci Sulph. Fusum.
*Suppuration, to Promote.* Sabinæ Ung.
*Sweating, Hectic.* Acetum, Acid. Acetic. Dil., Acid. Gallic., Acid. Sulph. Dil.
*Syncope.* Ammon. Liquor, Æther.
*Synovitis, Chronic.* Emp. Ammon. c. Hydrarg.
*Syphilis.* Conium, Corydalin, Ferri Iodidi Syr., Hyd. Subchlor., Hyd. Iod. Rub., Hyd. Iod. Virid., Hyd. Perchlor., Iodum, Mezereum, Potass. Iodid., Potass. Liquor, Sarsæ Rad., Sassafras, Sodæ Bicarbonas, Sodæ Hyposulphis, Sodii Iodid. *Mineral Waters:* Aix-la-Chapelle, Kreuznach, Vals, Woodhall.
*Syphilitic Nodes.* Emplastrum Hydrargyri, Hyd. Iod. Rub. Ung., Ammon. c. Hydr. Emp., Hyd. Nitr. Acid. Liq.
——— *Warts.* Acid. Acet. Glaciale, Acid. Nitricum, Cupri Sulphas.
——— *Ulcers.* Acid. Carbolic.

*Tabes Mesenterica.* Morrhuæ Oleum.
*Tape Worm.*—See *Anthelmintics.*
*Tetanus.* Aconitum, Cannabis Indica, Chloral, Physostigmat. Faba.
*Tetter.* Picis Ung.
*Thirst, to allay.* Acid. Citric., Acid. Phosphoric., Acid. Tartaric.
*Throat, Relaxed.* Acid. Tannic., Alumen, Argent. Nitras, Capsicum, Gummi Rubrum.
——— *Fœtid.* Acid. Sulphuros., Chlori Liquor Spray.
——— *Sore.* Acid. Carbolic., Acid. Hydrochlor. Dil., Acid. Sulphuros. Spray, Acid. Tannic. Spray, Sodæ Chlorinat. Liq., Potassæ Chloras.—See also *Sore Throat.*
*Thrush.* Acid. Hydrochlor. Dil.
*Tic Douloureux.* Ferri Oxid. Magnet., Ferri et Quiniæ Citras, Lin. Camph. Comp.
*Tinea Capitis.* Arsenici Iodidum, application; Acid. Acetic., Acid. Carbolic., Antim. Tart., Cupri Sulph., Picis Ung.
——— *Favosa.*—See *Porrigo.*
*Temperature, to diminish.* Aconitum.
**Tonics.**—Section A.
*Tonsils, turgid.* Acid. Carbolic.
——— *Relaxed.* Cupri Sulphas, Zingiber.
——— *Ulceration of.* Iodi Gargarisma.
*Toothache.* Acid. Sulphuros. Spray, Cajuputi Oleum, Capsici Lin., Caryophylli Oleum, Chloroform. c. Camphorâ, Creasotum, Gelsemii Tinctura, Pyrethrum, Quiniæ Ammon. Liq.
*Tubercles, Syphilitic.* Hydrarg. Nit. Acid. Liquor.
*Tuberculosis.* Pil. Hyd. Biniodidi, Pil. Hyd. Perchlor. c. Aconit. *Mineral Waters:* Achselmannstein, Kreuznach, Lippspringe, Ottilienquelle, Reichenhall, Soden.
*Tumours, Indolent.* Ammon. Chlorid., Ung. Hydrarg. Co.
——— *Malignant.* Acidum Nitricum, Potass. Caustica.
——— *Painful.* Humulus, Hyoscyamus.
*Typhoid Fever.* Acid. Hydrochloric., Ammon. Liquor, Amyli Enema, Argenti Nitras, Belladonna, Chlori Liquor, Cerevisiæ Fermentum, Sumbul Radix, Serpentariæ Rad.—See *Fever.*
*Typhoid state of system.* Arnica.
*Typhus.* Acid. Nitric. Dil., Baptisin, Potass. Bromid., Potass. Chloras, Rhei Radix, Serpentariæ Radix, Sumbul Rad., Sodæ Chlorin. Liq.
*Ulcerations.* Zinci Oxidum.
*Ulcers.* Acid. Boracic., Argenti Nitras, Calcis Chloratæ Liq., Collodium, Creta Præparat., Cupri Sulphas, Mel, Plumbi Acetas, Plumbi Carb., Resina Emp., Sabina, Zinci Sulphas, Zinci Ox. Ung.
—— *Cancerous.* Ferri Arsenias.
—— *Foul or Fœtid.* Acid. Carbolic., Acid. Salicylic., Acid. Sulphuros., Carbo Animal. Purif., Carbo Ligni, Cataplasma Fermenti, Chlori Liq., Calx Chlorata, Mel, Potass. Permanganas.
—— *Indolent.* Bals. Peruv., Benzoini Co. Tinct., Hydrarg. Lin., Kino Pulv., Resinæ Ung., Sabinæ Ung.
—— *Malignant.* Potassa Caustica.
—— *Painful.* Hyoscyamus.
—— *Sloughing.* Chloroform, Cataplasma Fermenti.
—— *Syphilitic.* Acid. Carbolic., Hyd. Nit. Acid. Liquor.
*Urine, Uric Acid in.* Ammon. Phosphas, Borax, Calcis Liq., Lithiæ Citras, Potass. Bicarb., Sodæ Bicarbonas, Sodæ Sulphas. *Mineral Water:* Vichy.
*Urine, Red Gravel.* Buchu, Potass. Bicarb., Potass. Citras.
—— *Phosphatic.* Acidum Phosphoric. Dilut., Ammon. Benzoas.
—— *Incontinence of.* Acid. Benzoic., Buchu, Ergota.
—— *Retention of.* Buchu, Tabaci Enema.
—— *Nocturnal Incontinence.* Belladonna, Benzoinum, Chloral.
—— *Putrid.* Acid. Carbolic., Creasotum, Carbo Animal., Papiers Carbonifères.
*Uterine Hemorrhage.* Acid. Tannic., Limonis Succus.
——— *or Vesical Catarrh.* Potass. Chloras, Triticum Repens, Matico.
*Uterus, to contract.* Borax, Cannab. Indica, Ergota.
*Uvula, Relaxed.* Catechu, Zingiber, Capsicum, Gummi Rubrum, Krameria, Pyrethrum, Rosæ Inf. Acid.

**Vermifuges.**—Section A.
*Vesical Irritation.* Doveri Pulv., Hyoscyamus.
**Vesicant.**—Section A.
*Vomit, Black.* Capsicum.
*Vomiting, to allay.*—See Antemetics, Section A.
——— *in Pregnancy.* Cerii Oxalas, Calcis Saccharat. Liquor.

*Vomiting, Chronic.* Calcis Liquor, Calcii Chloridum, Cerii Oxalas.

*Warts.* Acid. Acetic. Glaciale, Acid. Nitric., Ammonii Chlor., Argenti Nitras, Sabina.
——— *Syphilitic.* Cupri Sulph., Hyd. Iod. Rub. Ung., Hyd. Nit. Acid. Liquor, Sabina.
*Wasp Sting.* Ammon. Liquor, Chloroform.
*Wax, indurated.* Fel Bovinum.
*Whites.*—See *Leucorrhœa.*
*Whooping Cough.* Acid. Carbolic., Ammon. Bromid., Belladonna, Chloral, Cocci Mistura, Succini Lin., Trifolium Syrupus.
*Worms, Ascarides, Tape, and Round Worms.*—See *Anthelmintics.*
*Wounds.* Acid. Boracic., Acid. Sulphuros., Benz. Tinct. Co., Collodium Flexile, Glycerinum, Resinæ Emplastrum, Tinct. Benzoin. Comp.
——— *Lacerated.* Acid. Carbolic. c. Oleo, Acid. Sulphurosm.

THE END.

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